Alberta Conservation Association

Conserving Alberta's Wild Side

Annual Report 2011/12

Conserving Alberta's Wild Side

Our Mission

ACA conserves, protects and enhances fish, wildlife and habitat for all Albertans to enjoy, value and use.

Our Vision

An Alberta with an abundance and diversity of fish, wildlife and their habitat; where future generations continue to use, enjoy and value our rich outdoor heritage.

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Cover Photo: Trail Cam photo of wolverine (*Gulo gulo*).

Annual Report 2011/12

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Alberta Conservation Association

Conserving Alberta's Wild Side

Member Groups:

Alberta Fish & Game Association

Alberta Hunter Education Instructors' Association

Alberta Professional Outfitters Society

Alberta Trappers' Association

Nature Alberta

Pheasants Forever, Alberta Council

Treaty 8 First Nations of Alberta

Trout Unlimited Canada

Wild Sheep Foundation Alberta

Board of Directors

Executive

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Alberta Hunter Education Instructors' Association

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Wild Sheep Foundation Alberta

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Public At Large, Northeast Region

Sandra Foss, Treasurer
Nature Alberta

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Alberta Fish & Game Association

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Jeff Surtees - Trout Unlimited Canada

Travis Ripley - Minister's Representative, Environment and Sustainable Resource Development

Gordon Burton - Alberta Professional Outfitters Society

Calvin Rakach - Public At Large, Central Region

Dr. Lee Foote - Public At Large, Academic Representative

Jeff Smith - Public At Large, Southern Region

Dr. Mark Boyce - ACA/University of Alberta Chair in Fisheries and Wildlife

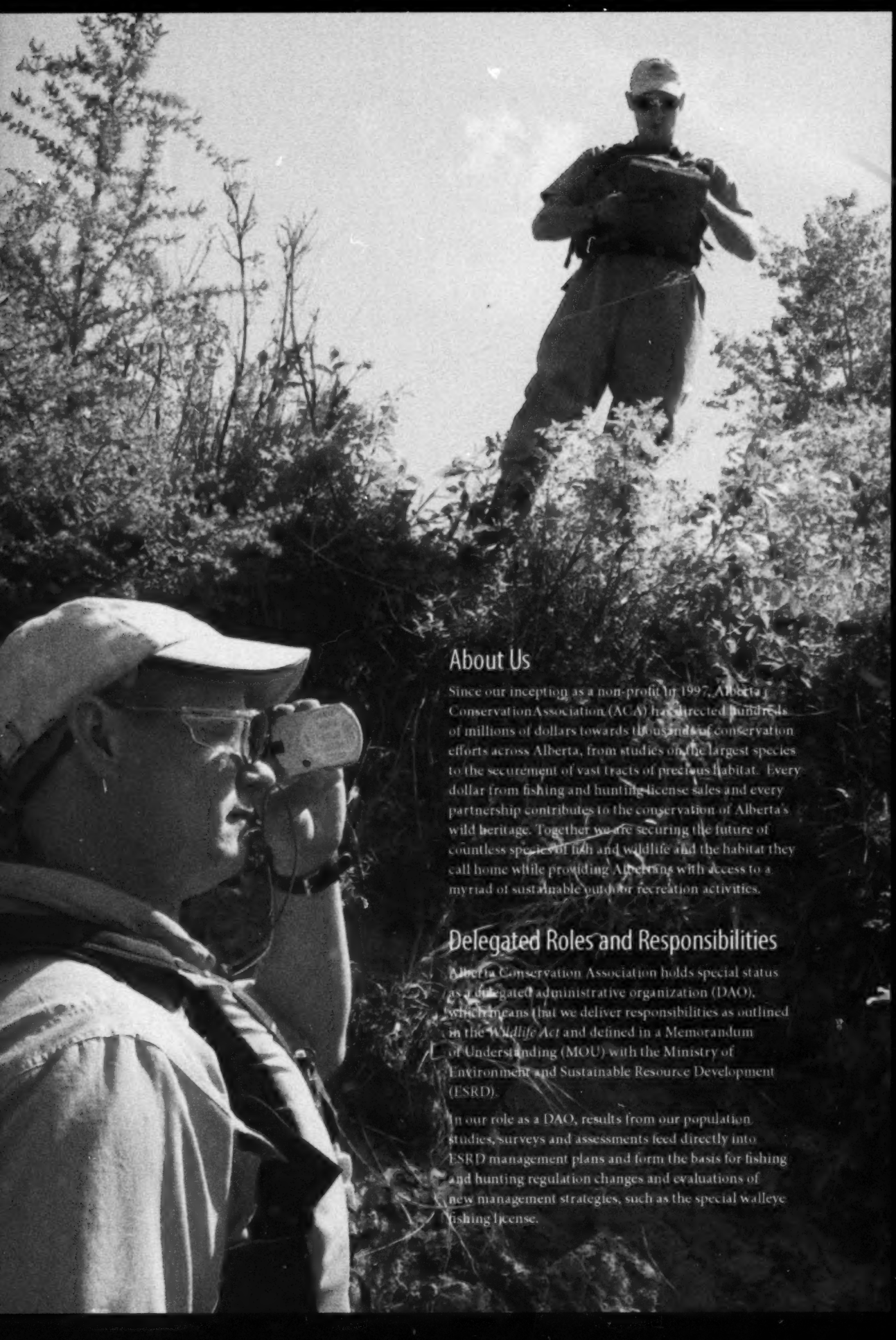
Bill Abercrombie - Alberta Trappers' Association

Bob Haysom - Pheasants Forever, Alberta Council

Adam Norris - Public At Large, Northwest Region

Ken Ambrock - Public At Large, Northern Board Liaison

Vacant - Treaty 8 First Nations of Alberta



About Us

Since our inception as a non-profit in 1997, Alberta Conservation Association (ACA) has directed hundreds of millions of dollars towards thousands of conservation efforts across Alberta, from studies on the largest species to the securement of vast tracts of precious habitat. Every dollar from fishing and hunting license sales and every partnership contributes to the conservation of Alberta's wild heritage. Together we are securing the future of countless species of fish and wildlife and the habitat they call home while providing Albertans with access to a myriad of sustainable outdoor recreation activities.

Delegated Roles and Responsibilities

Alberta Conservation Association holds special status as a delegated administrative organization (DAO), which means that we deliver responsibilities as outlined in the *Wildlife Act* and defined in a Memorandum of Understanding (MOU) with the Ministry of Environment and Sustainable Resource Development (ESRD).

In our role as a DAO, results from our population studies, surveys and assessments feed directly into ESRD management plans and form the basis for fishing and hunting regulation changes and evaluations of new management strategies, such as the special walleye fishing license.

Milk River Basin where MULTISAR collaborates with landowners to enhance habitat for wildlife.

photo: Brad Downey, ACA

From the Chairman

ACA is testimony to the adage "strength in numbers." We may not have the biggest staff or the longest history in the province, but together with our member groups we bring a rich and diverse history in fisheries and wildlife conservation to the table. Every member group, staff member, corporate partner and volunteer contributes immensely toward securing the future of wildlife and fish in our province.

As you read this annual report, I hope you appreciate the scale and importance of what ACA has achieved once again this year, thanks to the dedication and commitment of everyone who works together to achieve our common goal of conservation. Given the vision, mission and passion of our Board and staff, I assure you the best is yet to come.

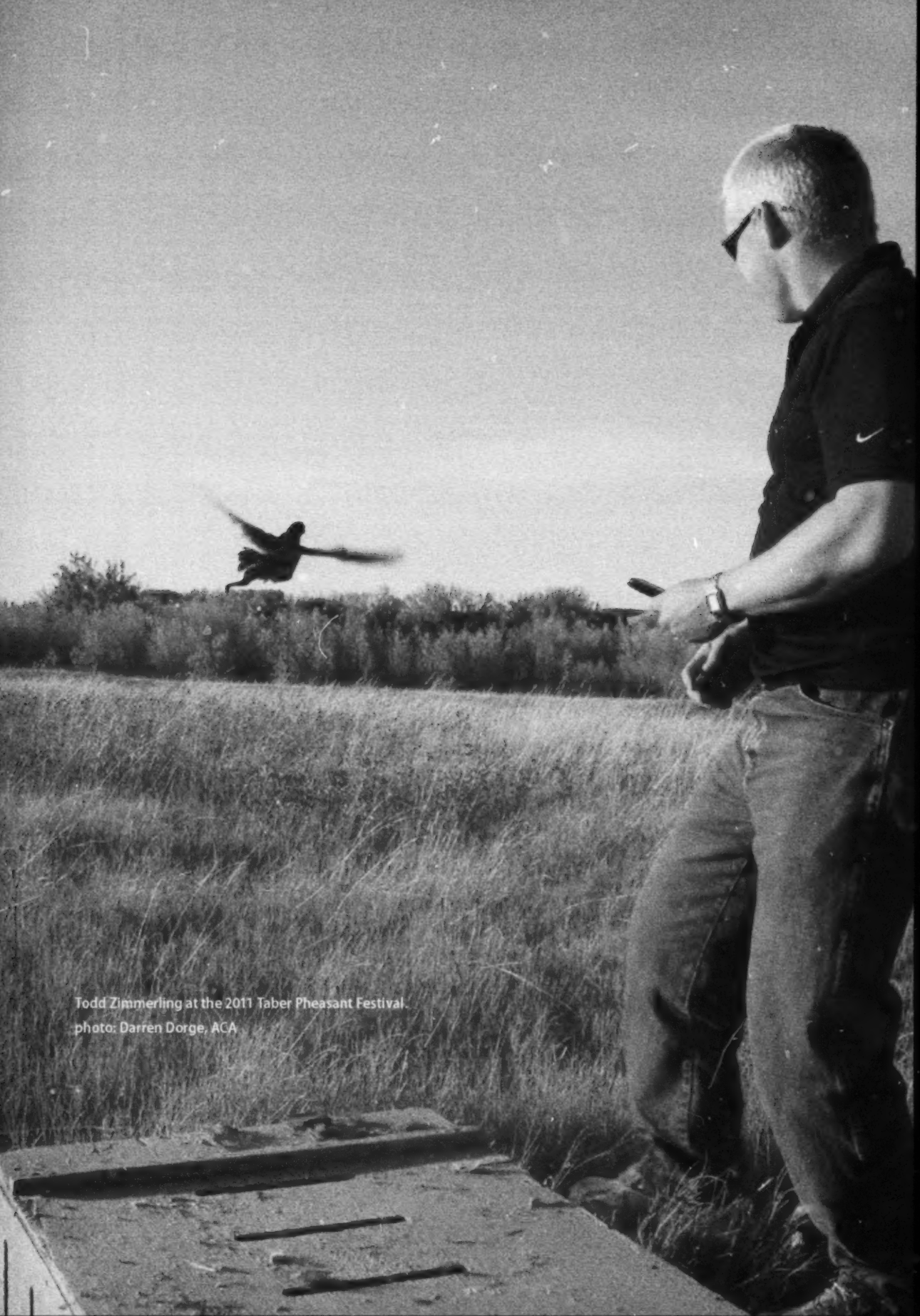
However, we face huge challenges. Alberta is almost entirely urbanized. Our citizens come from all around the world. Some come from countries where access to wildlife is minimal and where virtually no formal wildlife management policies exist. We must recognize there is a tremendous opportunity to introduce newcomers to Alberta's natural areas as well as educate them about responsible stewardship of wildlife and habitat. Another challenge is enabling residents of our cities to become better acquainted with wildlife and the pressures brought to bear on our rich—but non-renewable—wild resources.

I joined the ACA Board in 2004 because of my lifelong interest in the well-being of our wildlife and fish. I believe ACA's conservation model is unique in North America. Our collective vision, mission and passion create immense potential for good work, and our ability to contribute toward conservation policies is virtually unlimited. During this past year this potential unfolded as never before. The leadership of Todd Zimmerling has taken the vision to new heights and we are all excited about the future of ACA—but more importantly the health of our wildlife and fisheries.

I believe our greatest challenge over the next decade will be to engage as many Albertans as possible, directly and indirectly, in conservation. All Albertans need to understand the energy, resources and expertise necessary to protect our wildlife and fish and realize how they contribute to our quality of life.

Respectfully,

Tom Bateman, Chairman of the Board



Todd Zimmerling at the 2011 Taber Pheasant Festival.
photo: Darren Dorge, ACA

President and CEO's Message

This last year is one full of achievements. Our partnerships grew, and with it, our ability to conserve the land, wildlife and water that make Alberta a naturally vibrant, healthy place to live. The greatest conservation results are achieved by working together, and the extent to which we achieve them is magnified with support from others. We are grateful to the organizations that have dedicated resources to various projects through 2011/12; Alberta Sustainable Resource Development (ASRD), Alberta Hunter Education instructors' Association (AHEIA), Alberta Fish & Game Association (AFGA), Alberta Trappers' Association (ATA), Nature Alberta (NA), Pheasants Forever (PF) and a wide range of smaller local groups.

The appreciation we have for our partners goes beyond words. Their commitment to our work and support of $4.2 million in non-levy revenue mean we can focus on delivering results on a wide range of projects. Together we have successfully secured some 1,754 acres (710 ha) of habitat as new Conservation Sites. Conserving these wild spaces for outdoor recreation ensures Albertans can continue to experience nature by hiking, hunting, fishing, foraging and viewing wildlife. As in previous years, AFGA (and their affiliated clubs), PF, Nature Conservancy of Canada (NCC), and Ducks Unlimited Canada (DUC) were instrumental in the securement of these sites.

Assistance provided by our partner groups directly benefited our Wildlife, Fisheries and Land programs; particularly from AFGA, ASRD, ATA, Delta Waterfowl, DUC, NCC, PF, Trout Unlimited Canada and various watershed groups. These collaborations contribute to more efficient and effective use of hunter and angler dollars in Alberta, ensuring the best overall benefit for fish, wildlife, and habitat.

Among the new initiatives launched in 2011/12 was the Taber Pheasant Festival. This is the first time ACA was directly involved and it was a huge success, with nearly 500 hunters participating throughout the week.

The Festival's success was a result of partnerships among the organizing groups (AHEIA, AFGA, PF, Canadian Pheasant Company, Upland Birds Alberta, Taber and District Chamber of Commerce) and local landowners.

Another unique initiative we launched in 2011/12 was the half-hour "Let's Go Outdoors" TV program with Michael Short. The response from stakeholders and the public has been overwhelming. This project is heavily supported by corporate partners. It's an excellent opportunity to educate the public about conservation activities in Alberta and connect them to the outdoors and the role hunters, anglers and trappers play in conserving fish, wildlife and habitat.

Each organization has its own operating goals, but we proudly share one common goal: to ensure future generations have access to the same outdoor recreational activities we enjoy today. As we move into 2012/13 with our partners, we will continue to work together so that every precious conservation dollar and volunteer hour is used in the most efficient and effective manner.

Alberta has vast potential to stand out as a conservation leader, despite the immense development pressure we are witnessing today. The conservation community is dedicated to achieving this—keeping Alberta wild for generations to come.

Sincerely,

Todd Zimmerling

President and CEO
Alberta Conservation Association

Our People Our Culture

Mike Ranger, ACA conducts vegetation monitoring at the Upper North Saskatchewan River prescribed burn.

photo: Corey Rasmussen, ACA

Health and Safety Program

Workplace safety is a serious matter, particularly when a large segment of an organization's staff are out on the road or in remote field locations. Our Health and Safety Program has been specifically built to provide all our staff the best possible training, policies and procedures to ensure their safety and well-being no matter where the job takes them. We require everyone who works with us in any capacity (be it employees, contractors, volunteers, visitors, etc.) to comply with ACA's Health and Safety related policies and procedures for the protection of themselves and others.

2011/12 Overview

- We worked diligently to ensure all aspects of ACA's Health and Safety Program met or exceeded established standards in preparation for our application to the Certificate of Recognition (COR) program. The program was reviewed to ensure policies and procedures were consistently adhered to and appropriate records maintained. Several staff were trained as COR auditors. ACA was then peer reviewed and during the latter part of the year was interviewed by a certified external COR auditor. We achieved an overall score of 93%, resulting in ACA successfully obtaining COR designation issued by Alberta Employment and Immigration and co-signed by the Certifying Partner
- Reviews and updates were made to the Health and Safety Manual throughout the year, incorporating insight, comments and suggestions from ACA staff
- We saw an overall reduction in the number of workplace incidents, with no specific type of workplace hazard identified as particularly significant or common among ACA work environments. This can be attributed to increased awareness and appropriate proactive or preventative actions taken by ACA staff. All incidents at ACA are reviewed to reduce or eliminate potential hazards

Human Resources

ACA accomplishes a lot of work over vast territory every year, thanks in large part to our 78 permanent staff and 22 temporary seasonal staff. Human Resources not only ensures the best people are recruited for the job, but we are also integral to keeping our most valuable resource – our staff – trained, safe, educated and satisfied with the organization.

Year after year, it is our hardworking, dedicated staff both in the office and in the field that truly makes it possible to 'Conserve Alberta's Wild Side.' Congratulations and thanks are extended to the following individuals who have achieved significant Years of Service milestones this year.

5 Years of Service

Peter Aku, Fisheries Program Manager
Brad Hurkett, Intermediate Biologist
Leila Lassey, Intermediate Finance Technician

2011/12 Overview

Employee Survey

We are very pleased with the results of our annual employee survey. Highlights include:

- An impressive 97.4% of employees have a good understanding of ACA's identity and messaging thanks to tools such as the internal website, publications and various meetings conducted throughout the organization
- 93.5% of employees agree they are satisfied with ACA as a place to work, setting a new record high
- 90.9% of employees are satisfied with having a good work-life balance and a high of 91% are satisfied with ACA's benefit plan

Employee Retention

- Turnover is at 5.1%, a slight increase from the previous year
- We will continue to increase job satisfaction by providing employees the opportunity to maximize their abilities while improving their working environment

Information Technology

As we continue to grow as an organization, the management of, and ease of access to, systems and databases becomes increasingly important. Information Technology (IT) is committed to finding solutions, increasing operational efficiencies and saving resources in support of this growth.

2011/12 Overview

- Migrated to Windows 7. We saved $12,000 in licensing fees by utilizing non-profit programs
- Implemented ArcGIS 10.0 for staff that require GIS as part of their day-to-day activities
- Formed a GIS staff-based committee to plan future GIS environment developments within ACA
- Developed an aeration database for fisheries biologists to warehouse information from lakes and ponds across the province
- Tested new web-based tools to assist staff with day-to-day activities, easing time and costs within IT
- Provided daily technical support for issues relating to software, hardware, network and mobility systems

Warrensville Conservation Site
photo: Jennifer Straub, ACA

Map Grid C2 : 103

Communications

We continued to expand our digital reach into 2011/12, keeping newsletter subscribers, website visitors and app holders as up-to-the-minute as possible with the happenings at ACA. Several of these digital media saw dramatic increases in traffic and use over the last 12 months.

Perhaps our most significant foray into new media opportunities came in the form of the *Guide to Outdoor Adventure* app, launched on May 12. This app is available for iPhone and is a complete mobile version of our popular *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide* publication. Users can search all 700+ Conservation Sites by name, proximity, or type of activity. The app also includes a number of useful and interesting articles and tips on Alberta's big outdoors and its wild inhabitants. Within three months we had received in excess of 10,000 downloads. Our goal was not only to give die-hard hunting and angling enthusiasts a new, robust tool to use when planning their outdoor adventures, but also to attract a younger, more diverse audience as well as tap into the significant tourist traffic that visits our province every year.

Since the launch, we have also completed our first round of major updates to the app. Users can now search the 500+ hunting Conservation Sites by Wildlife Management Unit (WMU). To complement this functionality, we also added Hunter Tips and Safety (information courtesy of AHEIA), Ice Fishing Tips and Safety as well as some new seasonal photos and Conservation Site Getaways. The WMU search is also available on our website at ab-conservation.com/guide.

We have achieved success with the public relations surrounding the app as well, with several online newspaper editions across Canada and the US picking up the story in the second quarter of 2011. As of March 31, 2012, the app received 16,208 downloads. We have also completed development of mobile web pages for Blackberry and Android users.

A surprisingly happy jump came from our electronic newsletter, which saw a whopping increase of 17,700+ subscribers last year, thanks in large part to WIN card renewals. This monthly publication now goes out to some 47,000 subscribers. In addition, our open and click-through rates are approximately 15% higher than industry average. We appreciate the ongoing support of our long-term and new subscribers and are pleased at the confirmation that the stories and information we publish is of interest and value to our readers.

Along similar lines, the Spring/Summer 2012 edition of *Conservation Magazine* grew by four pages at the request of our Board of Directors, who urged us to keep providing all the news and insights we can into the outdoors and conservation in Alberta. We thank them for their support and encouragement as well.

Other internal and general housekeeping projects included promotion, design and webpages for the 2011 Taber Pheasant Festival, completing posters, signage, banners, brochures and other tools to help program areas achieve their annual goals. We made several improvements to the Corporate Partners in Conservation (CPIC) and WIN Card Benefits program pages on our website. Several additional website updates and improvements have been scheduled to launch into 2012.

2011/12 Overview

Publications

- 2010/2011 Annual Report produced
- 2011/2012 Annual Operating Plan produced
- *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*
  - Fourth edition published and 100,000 copies printed and distributed
- Launched the *Alberta Outdoor Adventure Guide* App
  - 16,208 users downloaded the free app off iTunes
- *Conservation Magazine*
  - Published bi-annually
  - Distributed hard copies to 40,000 subscribers and approximately 30,000 online readers
- 2012/2015 Strategic Business Plan Update

Web

- 117,025 unique visitors to www.ab-conservation.com, up 84% from last year

Social Media

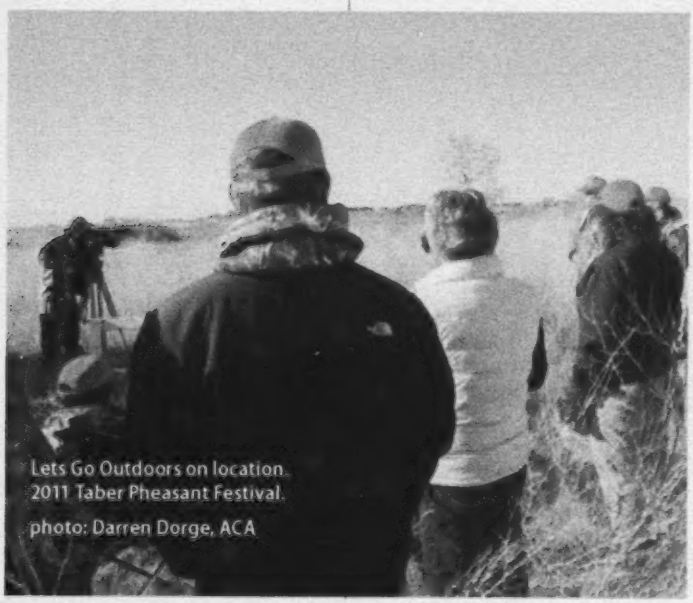
- 1,689 Responded to our "Report A Poacher" online survey
- 53,329 E-newsletter subscribers (Wild Mail) an increase of 27,326 (over 100%) from 2010
- 811 Facebook 'Likes'
- 594 Twitter followers

YouTube

- 9,412 viewers

Let's Go Outdoors partnership generated:

- Radio
  - 8,320 total occasions on radio produced in partnership with Let's Go Outdoors, combined between radio feature stories and the one-minute commercials
  - 1,600 additional occasions recorded with opening and closing billboards on the weekend radio show
  - 4,992 occasions of one-minute daily radio columns, each of these aired at a minimum of three times per day, seven days a week
- Television
  - LGO TV program aired on CTV2 with an average of 9,000 viewers per episodes (13). The show was also carried by Shaw Cable Edmonton. Shaw re-aired all 13 episodes several times.
- Vignettes
  - 10 one-minute television vignettes produced in partnership with Let's Go Outdoors
  - 48 television occasions resulted (each vignette was aired over a two week period during the prime time supper news breaks)
  - 3 million viewers reached
  - 26 feature stories produced resulting in 10,816 occasions on the weekend show and 6,240 occasions for daily features
  - 3 stand-alone features produced on the WIN Card benefit program that ran on the weekend show resulting in 256 occasions



Lets Go Outdoors on location 2011 Taber Pheasant Festival.
photo: Darren Dorge, ACA

Business Development

We rely heavily upon sponsorships from the business community to achieve our annual operating goals and leverage funding for significant milestones in conservation work and habitat securement. We're pleased to be a desired and welcomed partner to many Alberta corporations that support our various projects and align themselves with our work and values.

ACA's Corporate Partners in Conservation (CPIC) Program goes beyond most offset programs by providing unique opportunities for Alberta businesses to play a vital role in conserving Alberta's natural heritage. Our CPIC participants enjoy the ability to promote their affiliation with us through their own communications, and benefit also from ACA's promotion of these partnerships through our existing communications initiatives.

Business Development is also responsible for generating revenue through advertising sales to offset costs associated with Communications activities on television, radio and our in-house publications, *Conservation Magazine* and the *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*.

2011/12 Overview

- Six companies signed on as Corporate Partners in Conservation:
  1. Cabela's Canada
  2. Canadian Association of Petroleum Producers
  3. Cycle Works Motorsports
  4. DOW Chemical Canada
  5. Windshield Surgeons
  6. Let's Go Outdoors
- Secured more than $70,000 in advertising sales in the two 2011 issues of *Conservation Magazine* and the 2011-2012 *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide* – a 75% increase over last year.

Wildlife Program

Wildlife projects are delivered within four areas: 1) Ungulates, 2) Upland Game Birds, 3) Waterfowl, and 4) Species at Risk

Catch a glimpse of a cryptic carnivore

You're almost as likely to catch a glimpse of a Sasquatch as you are a wolverine when out in the wild. This shy behaviour, coupled with the rugged landscapes they haunt, make it difficult to learn about wolverines and their reactions to human disturbance. As part of the WHILDZ project, we partnered with the Alberta Trappers' Association to compile information their members find on wolverines, beginning with testing field protocols this past winter. Trail camera data from select locations provided evidence of visitation rates and times, while DNA results from hair samples will identify individuals, enhancing our understanding of their movements within Alberta and outside our borders. We also reviewed trapping records stretching back to the early 1970's which suggest about 25% of trap lines in Alberta have reported wolverine harvests over this period, as compared to 4% recording a harvest in 2011.

Keeping it wild

An important step in conserving wilderness areas is to identify where they are and put this information into a structure that is easy to access and understand. We're creating a mapping tool that identifies wilderness areas and key wildlife in these wild spaces. Done effectively, this tool will provide critical information that can be used by stakeholders, industry and government in land use planning discussions and negotiations. This past year we mapped human disturbance within an area greater than 5,000 km^2 in southwestern Alberta by overlaying roads, trails, pipelines and recent cut blocks. We captured over 40,000 remote photos at mineral licks to explain their daily and seasonal use by different species. Among the ungulates observed were mountain goats, mountain sheep, elk, moose, mule deer and white-tailed deer. Many of these licks are used for a long period of time beginning in late spring when the snow melts and continuing into early fall. We'll be adding movement corridors and other areas of importance for elk in the coming year.

Friendly farming

The prairies offer a wide tapestry of habitat for wildlife when in its native pristine form, but finding suitable habitat can be a challenge for many species when converted to cropland. We work with landowners within the Habitat Legacy Partnership project to enhance their land for wildlife while sustaining a profitable farming operation. Often we assist with identifying areas that are marginal for production but greatly benefit pheasants and other species that thrive in close proximity to intensive crop operations. Many landowners find that 5-10% of their land base is marginal at best, and can easily be sequestered as wildlife habitat without hurting the bottom line. We planted more than 13 km of shrub to create winter pheasant habitat in 2011, and used more than 14 km of drip irrigation to foster early shrub growth. We assess how our enhancement areas benefit other birds as well, and found more than 50 species at both control and treatment sites.

Pulling together

Much of the land base throughout the Milk River basin is a mix of cattle and farming operations. Our MULTISAR program works with volunteer landowners to benefit multiple species, in particular those that are at risk. Working with project partners, we help landowners develop habitat conservation strategies on their land, and target specific enhancements that benefit both wildlife and the landowner. In 2011, we seeded 680 acres back to native grass, of which 320 acres is in critical sage grouse habitat. We also planted 400 silver sage brush plugs in a natural mosaic to both test this procedure and provide a critical resource for sage grouse.

Big game surveys

Pronghorn surveys seemed to confirm what many hunters suspected: 2011's harsh winter led to a dramatic decline in numbers the following summer. Aerial mountain goat surveys, normally flown in early July, had to be postponed to allow the heavy snow pack to recede. As such, nanny groups were harder to find, but we will not know until summer 2012 whether this was the result of a population change or simply an artifact of the extended snow cover in the mountains. By contrast, snowfall was abnormally low in winter 2012 which caused us to cancel nearly 75% of the surveys this past winter. Despite these abnormal weather patterns we were able to complete 13 surveys for ungulates, including the goat and pronghorn estimates mentioned above.

Dancing kings of Alberta

Each spring, male sharp-tailed grouse put on their dancing shoes to impress the ladies at sites known as leks. While this showy display is hard to forget for anyone lucky enough to come across a lek, it's quite a challenge to find these locations when searching over a broad geographic space. In 2011, as part of the Sharp-tailed Grouse Habitat Inventory project we began trialling an approach for detecting leks by using remote listening devices (song metres). Our goal is to evaluate how effective they are at detecting sounds made at leks, and assess how reliable they are when

units are placed at intervals from 0 – 1000 metres from a lek. As predicted, detections decreased at greater distances from a lek and increased when sound recordings were pooled over multiple days.

Fleet of foot

Pronghorn are highly-specialized prairie dwellers that thrive in open spaces. The increasing prominence of cattle ranching into southern Alberta has brought a serious physical barrier to pronghorn: they have not developed the behaviour to jump over obstacles like fences. Often seen skirting along fence lines seeking a place to duck underneath, low lying fences can impede pronghorn movement and often scalps hair from their backs as they stoop under the bottom wire. In 2011, we mapped over 25,000 km of fence line in 363 townships to highlight key areas in need of fence modifications. Fence density was almost two times higher in grassland townships compared to cultivated ones. As part of the Where the Pronghorn Cross project, we continued our work with Alberta Fish and Game volunteers to modify fences in key areas along pronghorn migration routes.

2011/12 Overview

- The largest numbers of individuals of the same species documented at a mineral lick at one time was 23 mountain goats, 18 mule deer, 15 bighorn sheep and 10 wolves (but not all at the same lick!)
- 40 new hunters harvested their first bird by partnering with other groups to host two novice pheasant hunts
- 53 species and over 600 individual birds were recorded at Habitat Legacy Partnership sites to evaluate the benefits of habitat enhancements to species other than pheasants
- Heavy snow pack from winter 2011 delayed mountain goat surveys in summer 2011, but we did complete counts in the Crowsnest Pass and Grande Cache areas
- Pronghorn numbers were down substantially across their range in summer 2011 following severe snow storms from the previous winter
- $600,000+ secured from partners with our land management team to purchase 960 acres of habitat
- 42 sites received trail cameras along fence lines to observe pronghorn behaviour. The vast majority of pronghorn did not cross an unimproved fence line within camera range
- 53% occupancy was noted at 59 sites known to have previously been active as a sharp-tailed grouse lek in the northwest near Grand Prairie
- 10 km of trails enhanced with improved access on ACA-managed Conservation Sites for ruffed grouse hunting

Opposite:

Where the Pronghorn Cross project: page wire to be removed along CP rail line, J-BAR-J Ranch.

photo: Paul Jones, ACA

Abbreviations Index

ac	acre
fish/h	fish caught per hour
fish kept/h	fish kept per hour
fish/100 m^2 of net/24 h	fish captured per 100 m^2 of net per 24 hours
h	hour
ha	hectare
h/ha	hours per hectare
km	kilometre
m	metre
m^2	square metres
mg/L	milligrams per litre
mm	millimetre
mpn/100 mL	most probable number of coliforms per 100 millilitres
µg/L	micrograms per litre
y	year

Big Game Surveys

Big game surveys provide information on population sizes and trends, population demographics and reproductive output for a number of ungulate species in Alberta. Many stakeholders are interested in these data, including hunters and resource managers. Alberta Sustainable Resource Development uses these data as a source of information to assist with setting hunting quotas and to aid land use planning efforts. We work in partnership with Alberta Sustainable Resource Development to deliver these surveys in select wildlife management units across the province.

In 2011/12, we had to cancel 75% of the surveys that we planned to deliver during the winter because of below-normal snowfall. However, we were able to conduct surveys for multiple ungulate species in Alberta; these surveys provided 22 population estimates. Additionally, our staff assisted with two surveys funded by Alberta Sustainable Resource Development. We entered all data into the provincial Fisheries and Wildlife Management Information System. We will upload summary information to our web page for public viewing once final reports are completed in early summer 2012, making it available to the hunters and anglers who pay for the majority of costs associated with this project.

Partnerships

Alberta Sustainable Resource Development

Alberta Northern Leopard Frog Recovery Program

The northern leopard frog has suffered dramatic population declines in many parts of its range in Alberta and is listed as a *Threatened* species in the province. ACA is a member of the Alberta Northern Leopard Frog Recovery Team and is involved in the delivery of strategic actions outlined in the species' recovery plan. Between 2007 and 2010, we attempted to establish northern leopard frogs at 10 sites through egg translocations. In summer 2011, we observed frogs at four of these reintroduction sites, including evidence of successful breeding at two of these sites. In response to identified habitat threats at select sites, we implemented stewardship activities to mitigate potential negative impacts of cattle on important habitat. We monitored existing stewardship sites in summer 2011 to ensure their operation continues to achieve intended objectives. One of these stewardship sites (Jenner Springs) displayed a weed problem (Canada thistle) that had colonized a discontinuous area of approximately 7,000 m^2. We discussed Canada thistle control and eradication strategies with the landholder for implementation in summer 2012. We believe landowners play an important role in alleviating habitat threats that impact northern leopard frogs in Alberta.

Partnerships

Alberta Sustainable Resource Development, Alberta Tourism, Parks and Recreation, Government of Canada Habitat Stewardship Program for Species at Risk, Parks Canada, TD Friends of the Environment Foundation

Alberta Wildlife Status Reports

The Alberta Wildlife Status Report Series provides comprehensive summaries of the status of selected wildlife species in Alberta. High priority species are those considered *At Risk* or *May Be At Risk* in The *General Status of Alberta Wild Species 2010* or considered to be at risk at a national level by the Committee on the Status of Endangered Wildlife in Canada. Each spring, ACA and staff from Alberta Sustainable Resource Development prioritize the species that are most in need of a detailed status assessment. Status reports contain information on species distribution, habitat, population, limiting factors and management in Alberta and provide a basis for the Scientific Subcommittee (of Alberta's Endangered Species Conservation Committee; ESCC) to complete a formal status assessment of that species. The Subcommittee provides the ESCC with the formal status evaluation, and the stakeholder-based ESCC concurs or withholds concurrence of the recommended status, which is then provided to the Minister of Alberta Sustainable Resource Development to determine the legal designation. ACA oversees the entire publication process for status reports, including the contracting of experts to write the report, editing drafts, supervising the external review process, completing the final formatting, and distributing printed reports. In 2011/12, we published one new status report (pygmy whitefish) and initiated four others (prairie rattlesnake, hare-footed locoweed, western grebe, brassy minnow).

Partnerships

Alberta Sustainable Resource Development

Habitat Legacy Partnership

Upland game birds are highly valued for their showy colours, breeding displays and long history in the hunting tradition of Alberta. Ring-necked pheasants require a variety of habitats that provide suitable cover for nesting, brood rearing and travel. In 2011/12, we worked in partnership with Pheasants Forever (Calgary, Chinook and Lethbridge chapters), private landowners, municipal districts, irrigation districts and on ACA-managed sites to support enhancement activities for upland habitat. We hosted landowner advisory workshops that were strongly supported by

participants interested in finding ways to improve wildlife habitat on working farms. These workshops have led to farm visits where tailor-made enhancements are planned. We planted more than 13 km of shrub rows to improve winter habitat and installed more than 14 km of drip irrigation to increase the probability of successful shrub growth. We also collaborated with a student at the University of Lethbridge and used point count data collected at our enhancement and control sites to develop a baseline inventory of avian species present at each site. Given the short period that enhancements have been in place, we did not anticipate nor find large differences in species diversity between enhanced and control sites. However, this early process of evaluation has helped refine our protocol for ongoing evaluation of these enhancements and their effect on habitat and species diversity and abundance.

Partnerships

Alberta Hunter Education Instructors' Association, landowners, Municipal District of Taber, Pheasants Forever – Calgary Chapter, Chinook Chapter and Lethbridge Chapter, St. Mary River Irrigation District, University of Lethbridge

Hay-Zama Wetland Monitoring

This program was developed in response to concerns about the potential impact of oil and gas activities on waterfowl within the Hay-Zama wetland complex. As a condition of operation within the complex, Alberta's Energy Resources Conservation Board requires oil and gas companies to monitor staging waterfowl and suspend production of a well if waterfowl numbers exceed the level of 600 individuals within 30 m of a well. To monitor waterfowl numbers, we fly weekly aerial surveys during spring and fall migration periods over all producing oil and gas wells within the complex. Our weekly surveys also include an established route over the entire complex to estimate the aggregate number of staging waterfowl observed for each survey, which we use to assess when the bulk of migration occurs. In 2011, we observed peak numbers of waterfowl during the second survey week in spring (May 5) and the third survey week in fall (September 15). Waterfowl concentrations did not exceed threshold levels at any well site during the 2011 migration periods. We also flew a single aerial survey for bald eagle nests within the complex on June 7, 2011 and observed six active nests.

Partnerships

Hay-Zama Committee, NuVista Energy Ltd.

MULTISAR

MULTISAR is a multi-species stewardship program for species at risk focusing on the Milk River and associated watersheds. The program is a collaborative effort among landowners, ACA, Alberta Sustainable Resource Development and the Prairie Conservation Forum. In 2011/12, we completed detailed wildlife and range surveys on 19,489 ac of land and completed five habitat plans. The provincially Endangered ferruginous hawk and nationally Threatened loggerhead shrike, chestnut-collared longspur and Sprague's pipit are a few of the species we identified on these lands. We implemented enhancements on eight properties, including the reseeding of 680 ac back to native grass, safeguarding three trees that could be used by ferruginous hawks for nesting, controlling leafy spurge, planting 600 native shrubs (silver sagebrush, thorny buffaloberry and chokecherry), and installing 3.6 km of wildlife-friendly fence. Through open communication, we continue to build long-term relationships with the landowners who care for our wildlife and increase their awareness of species at risk. These relationships help us implement stewardship activities that benefit wildlife and complement the business strategies of individual landowners.

Partnerships

Alberta Sustainable Resource Development, AltaLink, Canadian National Sportsmen Shows, Canadian Natural Resources Limited, Environment Canada – Environmental Damages Fund, Government of Canada Habitat Stewardship Program for Species at Risk, landowners, Prairie Conservation Forum

Piping Plover Recovery Program

The piping plover is a small, black and white, stubby-billed shorebird listed as *Endangered* under Alberta's *Wildlife Act*. We address threats facing piping plover populations through the enhancement of habitat and the protection of nests. We also conduct annual surveys on core breeding lakes to monitor population numbers and the success of our recovery actions. Our work is done with the support of the Alberta Piping Plover Recovery Team, funding partners and the many landowners throughout east-central and southern Alberta.

In spring 2011, ACA, Alberta Sustainable Resource Development, Alberta Tourism, Parks and Recreation and the Department of National Defence carried out population inventories on 70 waterbodies for piping plovers as part of the fifth International Piping Plover Census. In total, we observed 244 adults on 24 lakes and we recorded 10 or more adults on 11 of these lakes. During the census, we recorded piping plovers that were banded in Louisiana, Alabama and Mississippi as part of a project monitoring the effects of the major oil spill that occurred in the Gulf of Mexico in 2010. We surveyed habitat on 70 lakes and recorded contact with 34 landowners

during the piping plover breeding season. We also completed fencing enhancements on four lakes to improve breeding habitat and protect the area from livestock, bringing the total shoreline edge habitat protected since 2002 to over 48 km. One of these projects was the removal of a non-wildlife-friendly fence that had been knocked down and submerged by rising water levels. This fence had been replaced with a wildlife-friendly fence in summer 2010.

Partnerships

Alberta Sustainable Resource Development, Alberta Tourism, Parks and Recreation, landowners, Department of National Defence, Ducks Unlimited Canada, TD Friends of the Environment Foundation

Pronghorn Program Phase III Mapping Fences

The pronghorn is the most specialized and representative large mammal that is considered to be endemic to the Grasslands Natural Region of Alberta. Having evolved on the prairies of North America, pronghorn have not developed an instinct to jump vertical obstacles. The increase in fencing that followed cattle ranching into Alberta poses a serious barrier to pronghorn movement. Pronghorn may cross under fence lines in some locations, but crossing under slows down their movements making them susceptible to predators and may strip hair off their backs causing lacerations and making them vulnerable to infection and frostbite. We mapped 25,015 km of fence line in 363 townships in southeastern Alberta. We set up 42 cameras on Canadian Forces Base Suffield and monitored the existing fence lines for a month. After one month, we randomly changed 21 fence lines to goat bars, which hold the bottom fence wire up, and monitored fence lines to see how pronghorn reacted to the enhancement. We recorded behaviour for 156 events for six species and found that the majority of ungulates did not cross the fence line. As results from the fence modification enhancement study become available, we will disseminate our findings to stakeholders, wildlife managers and conservation groups to help guide future work aimed at removing barriers to pronghorn movement.

Partnerships

Alberta Fish and Game Association, Bushnell, Cabelas Canada, Canadian Forces Base Suffield, Safari Club International – Northern Alberta Chapter (Hunting Heritage Fund), World Wildlife Fund, Writing-On-Stone Provincial Park

Restoring Natural Habitat for Wildlife

This project (formerly delivered as *Ungulate Winter Range Restoration*) helps restore natural ecosystem patterns and wildlife habitat values within landscape units (e.g., watershed subbasins) and focal areas that have aged beyond the natural range of variability. To achieve this objective, we provide planning and logistical support to Alberta Sustainable Resource Development's prescribed burn program, emulate natural disturbance using mechanical clearing techniques, evaluate and monitor restoration activities on both public land and ACA-managed land, and develop landscape plans and targets for enhancement and restoration treatments.

In 2011/12, we did not participate in any planned prescribed burns due to unfavourable spring weather conditions delaying burn activities. However, we worked with Alberta Sustainable Resource Development to develop burn plans for our Northwest, Central and South regions. We also collected post-burn vegetation data within 57 subalpine sites of the Upper North Saskatchewan prescribed burn. Preliminary analysis of landscape-level and ecosystem objectives suggests the project is proceeding towards established targets. Specifically, the Upper North Saskatchewan burn appears to have substantially improved winter habitat for elk within the Cline River subbasin; primary habitat improved by 43% and secondary habitat improved by 11%. Further, we tested new protocols for evaluating biological resources and habitat restoration opportunities on six Conservation Sites and found them to be efficient for gathering baseline inventories of species and habitat. Finally, we developed a strategic plan that outlines proposed landscape and ecosystem objectives for restoring natural disturbance patterns within the Montane subregion of the Porcupine Hills. This document will help direct restoration activities and provide benchmarks to evaluate the success of future restoration work.

Partnerships

Alberta Sustainable Resource Development, TD Friends of the Environment Foundation

Ruffed Grouse Recreational Access

ACA has a strong history of securing and protecting habitat to benefit wildlife and the recreating public. Ruffed grouse are highly sought by upland bird hunters and offer exceptional traditional and family-friendly hunting experiences. This project provides Albertans with small game hunting opportunities on lands secured by ACA through improvement of trails to encourage hunter access and enhance habitat conditions for ruffed grouse.
In 2011/12, we enhanced more than 10 km of trail on five ACA Conservation Sites in the Peace River area in northwestern Alberta. Enhancement activities included removing large debris along grown-in trails, mowing grass and small

woody regrowth, and providing grit for ruffed grouse.

Partnerships

Alberta Fish and Game Association, Weberville Community Model Forest

Sharp-tailed Grouse Habitat Inventory and Stewardship

This project attempts to refine an efficient approach for repeatedly sampling lek sites to estimate occupancy over broad spatial areas. Ultimately, occupancy measures could provide a suitable metric to evaluate population status. In 2011/12, we began testing a modified approach for detecting sharp-tailed grouse leks using remote listening devices (song metres). We focused our attention in the first year on evaluating the utility of song meters to detect sounds made at lek sites and assessing if detection decreased when units were placed at intervals from 0 m to 1,000 m from a lek site and increased when sound recordings were pooled over multiple days. As predicted, detections using song meters decreased as distance from a lek site increased (out to 500 m) and increased when sound recordings were pooled over multiple days. We also visited 59 of 103 historical lek sites to estimate occupancy and found that more than half of these sites were active. In addition to our lek monitoring work, we continued to develop partnerships with provincial grazing reserves and members of the rural community to promote conservation and stewardship of breeding habitat.

Partnerships

Alberta Sustainable Resource Development, High Prairie Grazing Reserve, Wanham Grazing Reserve

Waterfowl Crop Damage Prevention Program

This program assists agricultural producers in reducing damage to crops caused by waterfowl during fall migration. Toward this goal, ACA provides waterfowl scaring equipment and advice free-of-charge to producers. We also maintain a web page that provides scaring advice and displays areas of potential waterfowl concentrations that hunters may use to plan their activities. In 2011/12, we provided 74 landowners with 181 scare cannons. Of these landowners, 34% allowed their contact information to be provided to waterfowl hunters. Anecdotal evidence suggested that many landowners did not want their contact information shared because they already had other waterfowl hunters wanting to hunt on their lands. We updated our web page weekly through the fall with areas of scare cannon use and received requests from five waterfowl hunters seeking concentrations of waterfowl as a result of the web page.

Partnerships

Alberta Sustainable Resource Development

Waterfowl Nesting Habitat Enhancement

This project uses artificial nesting structures to enhance nesting habitat for mallards (nest tunnels) and common goldeneye and bufflehead ducks (nest boxes). Whenever possible, we engage volunteers to install, monitor and maintain these structures. This involvement increases our volunteers' understanding and appreciation of waterfowl and their habitat needs and allows volunteers to participate in "hands-on" conservation.

In 2011/12, we provided 17 nest tunnels to volunteers for installation, bringing the total number of installed tunnels to 256 over the past seven years. We engaged two conservation groups and seven landowners to assist with maintaining and monitoring about half of these tunnels. In winter 2011, we monitored 85 nest tunnels and found that 62 of these were functional for nesting, with the remaining 23 damaged or missing from flooding. Of the 62 nest tunnels available, 55% were used with 97% successfully hatching at least one duckling. We maintained 35 nest boxes and installed three new boxes, bringing the total number installed to 1,300 boxes since 1989. We invited 300 landowners to participate in maintaining and monitoring nest boxes located on their properties. We also provided an additional 21 nest boxes to industry and individuals for installation. Further, we distributed over 400 copies of the *Nest Box Guide for Waterfowl, Alberta Edition* to individuals and groups, and we hosted two presentations and three field trips on waterfowl habitat needs to approximately 166 adults and 157 youth.

Partnerships

Alberta Fish and Game Association, Delta Waterfowl, Ducks Unlimited Canada, Syncrude Canada, Wildlife Habitat Canada, Windsor Plywood

Wildlife Volunteer and Outreach Project

Members of the public who volunteer with ACA develop skills and gain knowledge related to conservation and simultaneously increase ACA's capacity to deliver our projects. In 2011/12, we engaged 56 participants from the Alberta Volunteer Amphibian Monitoring Program and Crowsnest Conservation Society in our Wildlife Program. Volunteers submitted a total of 245 amphibian and 18 reptile observations, including two snake hibernacula (den) locations. The data collected represented 90% of the amphibian and 67% of the reptile species native to the province and increased our knowledge of the distribution of herpetofauna in Alberta. This information will help wildlife managers to incorporate appropriate setback distances around breeding ponds used by sensitive species, such as boreal toad, into forestry

Trappers collect wolverine hair samples from alligator clips.

Wildlife Habitat Initiative in Low Disturbance Zones – Wolverine Distribution Mapping Project.

photo: Mike Jokinen, ACA

harvest plans. The data collected will also support the updating of the general status of amphibians and reptiles in Alberta. To ensure ACA maintains high-quality volunteer opportunities, we developed an online volunteer feedback survey.

Partnerships

Alberta Sustainable Resource Development, Crowsnest Conservation Society, Edmonton Reptile and Amphibian Society, Royal Alberta Museum, TD Friends of the Environment Foundation

Wildlife Habitat Initiative in Low Disturbance Zones – Habitat Resources and Movement Corridors in Southwest Alberta

Many wildlife species seasonally depend on localized, resource-rich habitats during their life cycles. Unique habitat resources, such as mineral licks and dense berry patches, provide essential nutrients to ungulates and carnivores for growth and development during periods of dietary deficiency or increased energy demand. In 2011/12, we continued monitoring some of these unique habitat resources (e.g., mineral licks) in southwestern Alberta. We are creating a database of unique habitat features and have compiled a comprehensive spatial dataset of anthropogenic disturbances to identify areas of important wildlife habitat with currently low levels of human disturbance. In 2012/13, we will work towards sharing this information with resource managers and users through the development of an online mapping tool that will identify key wildlife habitat resources and movement corridors. We will continue to identify the location and seasonal use of mineral licks, which we predict will vary based on vegetation conditions throughout the summer. We believe that the inventory of unique habitat resources and mapping tool will significantly contribute to current and future land use planning in southwestern Alberta.

Partnerships

Alberta Sustainable Resource Development, Fish and Wildlife Division, Anatum Ecological Consulting, Devon Canada Corporation

Wildlife Habitat Initiative in Low Disturbance Zones – Wolverine Distribution Mapping

The wolverine is an icon of the Canadian wilderness and is a flagship species for conservation. The species commonly occurs in areas where human disturbance is low; yet, relatively little is known about how it might be affected by future development and climate change. In Alberta, the wolverine is considered a *Data Deficient* species indicating that there is insufficient information to determine whether it is at risk or stable in the province. The wolverine is classified as a furbearer in Alberta and is managed for fur harvest with a quota. Much of the existing population information in Alberta has been extrapolated from trapping records; however, we do not know if trapping harvest trends accurately reflect the distribution and relative abundance of wolverine. We are working with volunteers from the Alberta Trappers' Association to identify where wolverines are present in the province and what factors influence their distribution. As the project continues, we hope to understand the genetic relationships among wolverines across the province and the importance of these relationships in conserving the species over the long term.

Partnerships

Alberta Trappers' Association, Shell FuellingChange

Fisheries Program

Fisheries projects are delivered within three categories: 1) Enhanced Sports Fisheries (Lake Aeration and Enhanced Fish Stocking), 2) Monitoring and Evaluations, and 3) Riparian Conservation.

More fishing ... good!

Making something really good out of almost nothing. That's what Enhanced Sports Fisheries (Lake Aeration and Enhanced Fish Stocking) are all about, providing Albertans with recreational angling opportunities while reducing pressure on limited native fish stocks. The end result: happy anglers and conservation of important fish species.

Lake aeration breathes life into lakes that are especially prone to summer or winter kills. An impressive 17 lakes across the province benefitted from this treatment last year, creating great angling opportunities for residents of neighbouring communities. We also stocked some 131,000 catchable-size (i.e., 20-cm) rainbow trout into 60 lakes through Enhanced Fish Stocking (EFS) creating "put-and-take" trout fisheries where anglers are allowed to harvest up to five fish per day. These sites are located close to urban centres, making them very popular family destinations all summer long. Among the anglers we surveyed, most were very satisfied with their fishing experience at EFS ponds and frequented these sites because they were close to home.

In 2011/12, we initiated a graduate student thesis research project with the University of Lethbridge to investigate the suitability of waterbodies in urban centres including those on public recreational grounds and storm-water ponds that can support put-and-take recreational fisheries.

Results from our 2010/2011 studies with the University of Alberta indicate that aeration and trout

stocking have no significant negative effects on native fish, invertebrate, and amphibian communities in these lakes. This gives ACA confidence that these projects – while providing popular recreational angling opportunities to Albertans – do not compromise the ecosystem health of these lakes.

Taking stock

We conduct numerous monitoring and evaluation projects to provide information on the population structure, abundance, distribution, and life history of priority fish species. We also monitor sports fisheries for angler use, harvest, and demographics. We undertook 10 surveys at seven rivers, five lakes and 36 ponds, as well as interviewed 1,499 anglers during creel surveys. In our sport fish surveys we focus on walleye, northern pike, Arctic grayling, bull trout, cutthroat trout, rainbow trout, and brook trout. Results from these surveys assist ESRD with fisheries management plans and form the basis for fishing regulation changes. They also determine the effectiveness of new management strategies, such as the special walleye fishing license.

Our studies also generate critical information required for the development of key provincial conservation initiatives and resource management policies, including the Alberta Fish Sustainability Index, Alberta Wildlife Status Reports, and State of the Watershed reports under the Alberta Water for Life Strategy. Our bull trout studies in the east slopes drainages have identified key spawning tributaries, overwintering habitats, and sub-populations that were previously unknown. On the Clearwater River project, by incorporating advances in analytical techniques (such as occupancy modeling) we lead the development of population status assessment tools for bull trout. We also continued our study on the use of a fish-based index of biotic integrity to assess potential effects of land-use activities on fish communities.

Improving riparian areas

A healthy riparian area is critical to a healthy water body, particularly where located in close proximity to agricultural operations. Working with landowners, we use management tools such as streambank fencing, bank stabilization, provision of off-channel watering for cattle, education and outreach to enhance, maintain and protect riparian habitats and ecosystem health.

In 2011/12, we initiated a special riparian fencing project to protect and restore vegetation along a 40 km segment of the Owl River to support the provincial government walleye restoration program in Lac La Biche. Since 2006, more than 200 million walleye fry have been stocked in the lake, many of which are expected to begin spawning in 2011 and use the Owl River as their primary spawning system. However, potential reductions in water quality and spawning habitat in the Owl River resulting from riparian habitat degradation could limit success of the walleye restoration program. The goal of this project is therefore to mitigate these negative impacts and ensure long-term availability of optimal walleye spawning requirements in the Owl River.

We also conducted several community outreach activities including demonstration tours, open houses and workshops to highlight our projects and increase public interest in the critical role riparian areas play in the landscape. Over 400 people, including 125 high school students, participated in outreach and educational activities. In total, we delivered 20 on-the-ground riparian restoration projects, including four livestock exclusion fencing, three off-channel cattle watering, and one bank stabilization (with 500 willow cuttings). We also planted over 22,000 seedlings at 12 Conservation Sites. Together, our projects protected approximately 12 km of streambank and over 2,270 acres of riparian habitat.

Overall, the success of our Fisheries program activities in 2011/12 involved the support from over 60 partners consisting of provincial and federal governments, industry, watershed groups, NGOs, counties/municipalities, universities, private landowners and other interested groups.

2011/12 Overview

- 17 aerated waterbodies successfully overwintered fish and prevented summerkills
- 130,000, 20-cm long rainbow trout stocked into 60 waterbodies
- 10 fisheries surveys conducted on 48 waterbodies; generated information on population status, recreational harvest, distribution, migration, and spawning habitat of sport fish
- Sport fish surveyed: walleye, northern pike, lake trout, bull trout, Arctic grayling, cutthroat trout, rainbow trout, and brook trout
- 1,499 anglers interviewed during creel surveys
- Bull trout studies in the east slopes drainages have identified key spawning tributaries, overwintering habitats, and sub-populations previously unknown
- 20 on-the-ground riparian conservation enhancements protected 12 km of streambank and over 2,270 acres of riparian habitat
- 22,500 seedlings and shrubs planted
- 400 people, including 125 high school students, participated in outreach and educational activities

Kevin Fitzsimmons, ACA, PIT tagging (passive integrated transponder) a bull trout in the Red Deer River.

photo: Marco Fontana, ACA

A Fish-based Index of Biological Integrity for Assessing Ecological Condition of the Beaver River

Urban development, agriculture and industrialization over the last century have resulted in land use modifications of Alberta's landscape that pose serious threats to the biological integrity of aquatic ecosystems in the province, including the Beaver River watershed. We developed an index of biological integrity (IBI) for assessing the health of the Beaver River watershed, comprised of the Beaver, Amisk and Sand Rivers, using data collected on fish assemblages and a suite of physicochemical variables. We used boat electrofishing to sample 50 sites: 31 on the Beaver River, 17 on the Sand River and two on the Amisk River. We used physiochemical and geographic data to assess the level of disturbance of each site. White suckers represented 52% of the total catch while the sport fish species, walleye and northern pike, represented less than 2% of the catch. Interviews with long-time anglers in the watershed indicated that sport fish have decreased in size and abundance over the past 30 years. We identified 13 candidate metrics based on the fish community and screened them for responsiveness to disturbance using multiple regression and an information-theoretic approach. Five metrics (percentage of invertivorous cyprinids, percentage of benthic invertivores, percentage of omnivores, percentage of lithophils and percentage of carnivores) were significantly related to human disturbance and were used to calculate the IBI. The resulting multi-metric IBI was highly sensitive to changes in cumulative anthropogenic disturbances, particularly road density, which is mainly related to agricultural and petroleum sectors in our study area. Our IBI is a useful tool for biological monitoring of the Beaver River watershed and could be used in the future to assess the effects of industrial development and remediation strategies on the health of the aquatic ecosystem throughout the watershed.

Partnerships

Alberta Environment, Alberta Sustainable Resource Development, Alberta Tourism, Parks and Recreation, Beaver River Watershed Alliance, Municipal District of Bonnyville

Abundance of Spawning Walleye and Availability of Spawning Habitat in Vandersteene Lake

Vandersteene Lake, located in northwestern Alberta east of Red Earth Creek, has been classed as a "trophy" status walleye fishery for over a decade. However, in recent years anglers have reported a decline in the quality of the fishery. In 2004, ACA conducted surveys to identify the level of angling pressure and determine abundance and population structure of walleye in the lake. Results of the study identified high angling pressure and a lack of recruitment as possible limiting factors of the walleye population. In 2011/12, our primary objectives were to assess spawning activity and habitat and estimate the population of mature spawning walleye. However, spring forest fires restricted access into Vandersteene Lake during critical spawning periods preventing us from conducting these surveys. Instead, we evaluated the efficacy of angling as a suitable capture method for marking adequate numbers of walleye for a mark-recapture population size estimate to occur the following spring. Catch rates were low (0.05 fish/h) and insufficient to mark adequate numbers of fish; therefore, the project has been deferred indefinitely.

Partnerships

Alberta Sustainable Resource Development

Beaverlodge Riparian Conservation

Bank-side livestock feeding and watering, vehicle fording, and in-stream alterations have degraded riparian areas in the Beaverlodge River drainage. Since 2004, ACA has worked to rehabilitate and conserve riparian areas within the Beaverlodge River and two of its tributaries. We partner with landowners, provincial and municipal government, and other conservation organizations to deliver a variety of projects, including streambank fencing, alternative livestock watering systems and tree planting. We identify potential project sites and approach the associated landowners to collaboratively plan riparian enhancement projects. As projects are delivered, we arrange for the collection of baseline vegetation and water quality information allowing us to monitor the impact of riparian restoration activities. In 2011/12, we and our partners co-ordinated the planting of 22,000 trees at 12 sites, including five new project sites and two ongoing project sites. We signed five habitat enhancement agreements with landowners who received trees. In total, these agreements enhanced 19.2 ha (47.4 ac) of riparian habitat along 4.5 km of stream.

Partnerships

Alberta Agriculture and Rural Development, ConocoPhillips, County of Grande Prairie, Penn West Energy, Royal Bank of Canada, West County Watershed Group

Clearwater River Core Area Bull Trout Status

The majority of Alberta's bull trout populations are classified as being *At Risk* or *High Risk* of extirpation according to Alberta Sustainable

Resource Development's ranking system. The Clearwater River core area bull trout population is classified as being at *High Risk* of extirpation. The objective of this study is to determine the area of occupancy of bull trout in the Clearwater River core area. We used a patch-based approach for monitoring bull trout distribution modified to enable occupancy estimation and modeling. We delineated patches using stream order, elevation and watershed area resulting in 23 patches in the Clearwater River core area. We determined five sample reaches per patch are necessary to achieve a false absence rate of 0.2 given an estimated bull trout detection probability of 0.3. We considered patches to be occupied when we captured at least one juvenile bull trout (<150 mm fork length). In 2011/12, we captured 122 bull trout ranging in size from 61 to 302 mm fork length at 57 sample reaches. We detected juvenile bull trout in six of the 14 patches sampled this year. Field work will continue in 2012/13.

Partnerships

Alberta Sustainable Resource Development

Distribution and Abundance of the Migratory Bull Trout Population in the Castle River Drainage

Alberta's bull trout populations have declined over the last century due to anthropogenic disturbance. Habitat fragmentation and degradation, migration barriers, introduction of non-native fish species, and overharvest have reduced the natural range of bull trout in southwestern Alberta to an estimated 31%. Currently, bull trout occur in most headwater drainages throughout the East Slopes of the Rocky Mountains, and land-use development within these drainages continues to impact bull trout and bull trout habitat. ACA is conducting a multi-year bull trout population and spawning habitat assessment to determine the abundance of the migratory bull trout population and the distribution of spawning habitat in the Castle River. In fall 2011, we installed aluminum conduit fish traps in the South Castle River, West Castle River, Carbondale River and Mill Creek to capture post-spawn migratory bull trout. We marked all adult bull trout (>300 mm) with a unique internal transponder tag for the purpose of tracking individuals during recapture events. We captured and tagged a total of 197 adult migratory bull trout in four major spawning streams: 79 fish in South Castle River, six fish in West Castle River, 72 fish in Carbondale River, and 40 fish in Mill Creek. We conducted redd counts within all spawning streams throughout the study area and observed a total of 298 redds along 110 km of stream: 98 redds in South Castle River, 26 redds in West Castle River, 68 redds in the Mill Creek drainage, and 91 redds in the Carbondale River drainage.

Partnerships

Alberta Sustainable Resource Development, Devon Canada Corporation

Edson River Riparian Conservation

In 2010/11, ACA identified the Edson River watershed as a priority for riparian conservation and initiated a project to improve riparian conditions in the watershed to benefit sport fish, wildlife, livestock and users of the waterbody. A survey of riparian health conducted by ACA in 2010/11 showed that almost half (49%) of the Edson River riparian areas were degraded. In 2011/12, we approached local landowners to present information on riparian conservation and solicit interest in delivery of enhancement projects. We worked with co-operating landowners to create a plan to enhance the riparian areas associated with their properties. We measured water quality parameters and assessed macro-invertebrate communities to establish baseline conditions to evaluate the impact of riparian enhancement activities. We worked with a local leaseholder to delineate a 30 m setback for haying near riparian areas that creates a vegetated buffer between hayfields and the river. We also partnered with a landowner to plan an exclusion fencing and off-site watering project that will be installed in spring 2012.

Partnerships

Fisheries and Oceans Canada, Penn West Energy, Royal Bank of Canada

Enhanced Fish Stocking Project

This project provides anglers with increased opportunities to catch and harvest 20 cm rainbow trout in parts of Alberta where angling opportunities are limited or do not exist. Recipient waterbodies are prone to winterkill and require an annual rainbow trout stocking to maintain angling opportunities. All rainbow trout stockings are delivered through contracts with private growers. In 2011/12, we stocked a total of 59 waterbodies with 131,100 rainbow trout during 84 stocking events. We completed approximately 65% of these stockings prior to the May long weekend. Since ACA assumed responsibility for the project in 1998, we have stocked over 1.8 million fish during 1,206 stocking events.

Partnerships

Alberta Sustainable Resource Development

Inventory of Sport Fish in the Edson River

In 2010/11, ACA initiated a riparian conservation project for the Edson River watershed to protect and restore riparian areas with the ultimate goal of facilitating recovery of the sport fish community. To support this riparian conservation

project, we collected baseline data on the distribution and abundance of sport fish species in the system for measuring responses to future restoration activities. During the summer of 2011, we electrofished 28 reaches (~27 km) of the Edson River using a cataraft electrofisher to collect baseline fisheries information to gauge ongoing remediation activities. We stratified reaches by riparian health score and encompassed the full range of land use disturbance in the watershed. Mountain whitefish was the dominant sport fish, followed by rainbow trout and Arctic grayling. Sucker species dominated the catch in terms of biomass at 44%, followed by mountain whitefish at 28%, Arctic grayling at 9%, and rainbow trout at 8%. General sport fish species richness was higher at sample reaches assigned good aerial riparian health scores than those assigned fair to poor health scores. Biomass for sport fish, non-sport fish, and all species combined and total estimated fish cover were greater at sites where streambanks were classified as >50% vegetated versus sites classified as <50% vegetated. Mountain whitefish was the most widely distributed and frequently captured sport fish. Rainbow trout and Arctic grayling were distributed throughout the study area, periodically occurring in the upper to lower reaches.

Partnerships

Alberta Sustainable Resource Development, Fisheries and Oceans Canada

Lake Aeration

ACA uses aeration as a fisheries management technique to provide Albertans with recreational angling opportunities in areas of the province where such opportunities are otherwise limited. Aerated waterbodies are typically shallow, eutrophic, experience prolonged ice cover, and are prone to both summer and winter fish kills. We use aeration to maintain dissolved oxygen levels above 3 mg/L to promote year-round survival of stocked trout. In 2011/12, we aerated 17 waterbodies across Alberta. All of our surface-aerated waterbodies successfully overwintered trout. Similarly, no summerkills were reported at any of our aerated waterbodies. We identified and continued to develop potential aeration opportunities to create or enhance angling opportunities. Further, we established and maintained financial and in-kind partnerships on existing and new aeration projects.

Partnerships

Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Tourism, Parks and Recreation, Canadian Forest Products Ltd., Clearwater County, Daishowa-Marubeni International Ltd., Devon Canada Corporation, Fisheries Enhancement Society of Alberta, Northern Sunrise County, Sundance Forest Industries Ltd., TransAlta, Trout Unlimited Canada – Yellowhead Chapter, Village of Spring Lake, Weyerhaeuser

Life History Strategies and Spawning Demographics of Bull Trout in the Upper Red Deer River Drainage

Currently, the status of the Red Deer River bull trout core area population is At Risk of extirpation, with the short-term trend indicating a population in decline. Impacts on bull trout from land use and increased angling pressure are concerns in this drainage. Describing bull trout abundance and life history strategies and identifying spawning habitat in the upper Red Deer River drainage are fundamental to the management and conservation of the species. The 2011/12 program year was the third and final year of our study on bull trout life history strategies and spawning demographics in the upper Red Deer River drainage. During mid-summer electrofishing in Sheep Creek, we captured a total of 41 bull trout ranging in size from 66 to 338 mm fork length and estimated bull trout abundance for the creek to be 949 (95% confidence interval = 321 – 3,087). In September, we captured seven bull trout moving upstream through our fish trap on Sheep Creek and 17 bull trout moving downstream of the trap indicating a fluvial population of bull trout in Sheep Creek. We also counted 68 redds in Pinto Creek and 44 redds in Sheep Creek in September. Our study will help resource managers make informed management decisions regarding bull trout in the upper Red Deer River drainage.

Partnerships

Alberta Sustainable Resource Development

Overwintering Habitat and Distribution of Arctic Grayling in the Christina River Watershed

Increased industrial development activities, particularly winter water withdrawals, road and pipeline crossings, continue to put pressure on Arctic grayling populations within the Christina River watershed. Yet, very little information exists on winter habitat requirements and distribution of Arctic grayling within the Christina River watershed, making it difficult for fisheries managers to make sound decisions with respect to location and/or timing of these disturbances, particularly with respect to winter activities. The purpose of this project was to undertake a winter habitat use and distribution assessment of Arctic grayling to provide watershed-specific information to fisheries managers with respect to key overwintering areas. Our goal for 2011/12 included scoping activities to identify logistic needs

and develop a robust study design for implementation in 2012/13. Implementation of this project was contingent upon acquisition of partner funds that we did not acquire; hence, we suspended the project.

Partnerships

None

Owl River Riparian Restoration and Enhancement Project

Since 2006, the provincial government has stocked nearly 200 million fry and fingerlings to restore walleye populations to Lac La Biche, many of which are expected to begin spawning between 2011 and 2013. The Owl River is the primary spawning river for Lac La Biche walleye. However, potential reductions in water quality and spawning habitat in the Owl River from riparian habitat degradation could limit success of the walleye restoration program. In 2011/12, we collected baseline data on riparian health, water quality and distribution of walleye spawning habitat to assess the effectiveness of a long-term initiative to protect and restore riparian vegetation along a 40 km segment of the Owl River. Our health assessment indicated that 47% of riparian areas are in good condition, 39% are in fair condition and 14% are in poor condition. We observed several walleye in the upper 10 km of the study area in May but very few in the lower 30 km, confirming previous identification of the upper section as suitable walleye spawning grounds. Substrate in the upper section was dominated by boulder, cobble and gravel suitable for spawning, while the lower section consisted mainly of fines and sands unsuitable for spawning. Dissolved oxygen levels were high (6.0 – 13.6 mg/L) throughout the system from May to August. Total phosphorus concentrations were high (summer average: 92 – 140 µg/L) throughout the system; concentrations were higher at downstream sites than at upstream sites. Total coliform counts exceeded established limits for agricultural use (>1,000 mpn/100 mL) at several sites. We initiated communication with several landowners interested in working with ACA to provide long-term protection of riparian vegetation along the river. We negotiated a verbal agreement with a leaseholder, pending approval by Alberta Sustainable Resource Development Lands Division, to protect approximately 9 km of riparian area along the river.

Partnerships

Syncrude Canada Ltd.

Southern Riparian Conservation

For the past decade, ACA has supported riparian enhancement initiatives in southern Alberta. Past projects involved working with the Beaver Creek Watershed Group, Todd Creek Watershed Group and individual landowners. Six more watershed groups in southern Alberta have been engaged, and several key conservation groups view ACA as a valuable partner. In 2011/12, we completed one riparian pasture fencing and spring development project and constructed an additional 1 km of riparian fencing in the Todd Creek watershed. We also planted approximately 500 willows and cottonwoods on Five Mile Creek. We participated in an educational school field day with the Drywood/Yarrow Conservation Partnership involving over 100 high school students and participated in the Pincher Creek Watershed Group "Blueweed Blitz" weed pull and education day involving 100 volunteers. We also provided partner funding for an off-site solar watering unit on the Oldman River. Further, we attended workshops and meetings with other watershed groups, partner conservation groups and interested parties. We also organized a watershed tour for ACA staff and partner groups. Strong partnerships have been developed with the Southwestern Alberta Conservation Partnership and the Oldman Watershed Council, and planning for future projects has been initiated. Our continued involvement with watershed groups and their partners will contribute to riparian habitat enhancement in southern Alberta.

Partnerships

Alberta Agriculture and Rural Development, Alberta Riparian Habitat Management Society (Cows and Fish), Alberta Sustainable Resource Development, Beaver Creek Watershed Group, County of Lethbridge, Drywood/Yarrow Conservation Partnership, Indianfarm Creek Watershed Group, LaFarge Canada, Lyndon Creek Watershed Group, Oldman Watershed Council, Penn West Energy, Pincher Creek Watershed Group, Prairie Farm Rehabilitation Administration, Royal Bank of Canada, Southwestern Alberta Conservation Partnership, Trout Unlimited Canada, Todd Creek Watershed Group, Waterton Watershed Group

Sport Fisheries Surveys: Haig, Figure Eight and Sulphur Lakes, Alberta, 2011/12

High fishing pressure, coupled with slow-growing and late-maturing populations, has resulted in the overharvest of many of Alberta's sport fish populations including walleye and northern pike. To collect information that will assist with the management of these species, we conducted a creel survey on Haig Lake in summer 2011. In addition, we collected similar information to assist with the management of stocked trout fisheries on Figure Eight and Sulphur lakes. We estimated that angling pressure for Haig Lake was 2.8 h/ha, with anglers making 887 trips and fishing for

2,554 h. Harvest and release rates were higher for walleye than for northern pike, with associated catch rates of 0.52 fish/h and 0.48 fish/h, respectively. For the stocked trout fisheries, angling pressure was twice as high at Figure Eight Lake (105.0 h/ha) as at Sulphur Lake (51.0 h/ha). Anglers made 2,477 trips and fished for 4,095 h at Figure Eight Lake and made 1,161 trips and fished for 2,703 h at Sulphur Lake. Our data will support Alberta Sustainable Resource Development in the management of these sport fisheries.

Partnerships

Alberta Sustainable Resource Development

Stream Crossing Remediation

Arctic grayling populations in Alberta have severely declined since the 1950s primarily due to habitat fragmentation resulting from improperly installed or hanging culverts. To generate information to help mitigate these declines, we reviewed all ACA stream crossing information and developed a stream crossing site prioritization process for five northern watersheds, including the Simonette, Kakwa, Notikewin, Swan and Upper Athabasca rivers. We prioritized sites for remediation based on the following criteria: stream order, fish presence at crossing, proximity to fish-bearing water and quantity of upstream habitat above barrier. Of the five watersheds assessed, the Swan River watershed had the greatest number of stream crossings with potential fish passage barriers (74%, sample = 351 crossings). With this information, crossing owners can develop remediation plans within their areas.

Partnerships

None

Trout Stocking Evaluation 2011/12

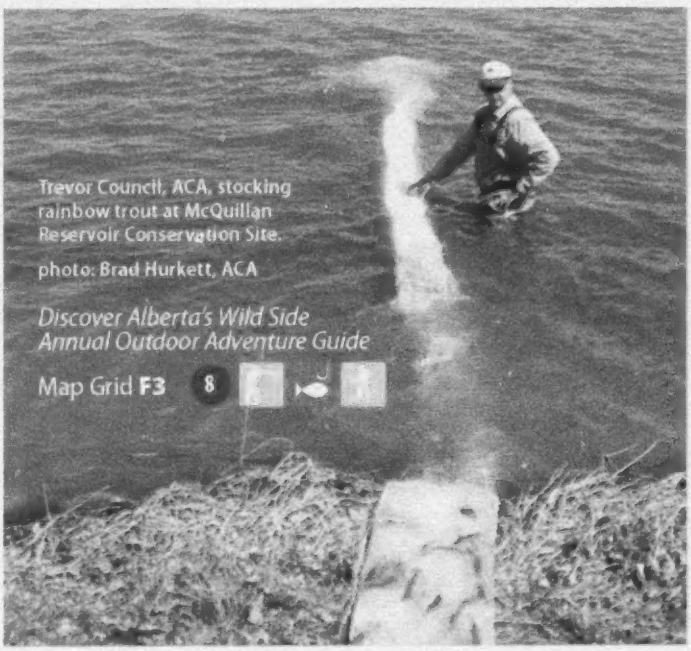
Stocking trout to create put-and-take fisheries is a popular management tool for providing recreational fisheries. ACA annually stocks approximately 60 lakes with 131,000 trout. An initial evaluation of our stocking program conducted at nine stocked lakes between 2008 to 2010 indicated low survival of stocked fish produce sport fisheries with low catch rates; however, anglers consistently reported high levels of satisfaction. In 2011/12, we continued to collect data to evaluate the efficacy of our stocking program by determining angler satisfaction at six additional lakes and collecting physiochemical data from all ACA stocked lakes. Creel surveys at Anderson, Castor, Cipperly's, Gooseberry, Pleasure Island and Two Hills lakes revealed that the number of angling trips ranged between 0 to 661, the number of angling-hours ranged between 0 to 849, and catch rates ranged from 0 to 0.39 fish kept/h across all lakes. We observed 13 fish harvested at two lakes. The majority of anglers were satisfied with their angling experience and they fished these lakes because they were "close to home". Chlorophyll-a and total phosphorous increased significantly from early season to late season. We found no significant difference between early and late season samples of Total Kjeldahl nitrogen, nitrate and nitrite, and turbidity. Analysis of our data for temperature, dissolved oxygen and pH is forthcoming.

Partnerships

Alberta Student Temporary Employment Program, Canada Summer Jobs

Walleye Stock Assessment Program 2011/12 – Moose and Fawcett Lakes

Alberta walleye populations experience considerable fishing pressure due to an imbalance of high angler densities and limited fishing opportunities. In 1995, Alberta Sustainable Resource Development implemented the Alberta Walleye Management and Recovery Plan to


Trevor Council, ACA, stocking rainbow trout at McQuillan Reservoir Conservation Site.
photo: Brad Hurkett, ACA
Discover Alberta's Wild Side
Annual Outdoor Adventure Guide
Map Grid F3
8

facilitate the protection and recovery of walleye fisheries. In support of this plan, we conducted gill netting surveys at Fawcett and Moose lakes in the fall of 2011 to collect data on walleye abundance, population structure and growth that will help Alberta Sustainable Resource Development determine the status of these walleye populations and make future management decisions. Relative abundance of walleye was higher in Moose Lake (19.4 fish/100 m^2 of net/24 h) than in Fawcett Lake (15.3 fish/100 m^2 of net/24 h). Walleye populations in both lakes exhibited wide and stable age-class distributions. The majority of Fawcett Lake walleye were 8 y in age and 425 to 475 mm total length, while the majority of Moose Lake walleye were 4 y in age and 450 to 550 mm total length. Overall, growth rates were slow (500 mm in 12 to 15 y) for Fawcett Lake walleye. Males grew slower than females with estimated average maximum sizes of 486 and 520 mm total length, respectively. Walleye in Fawcett Lake matured early, with both males and females reaching maturity at age 6. Growth rates were moderate (500 mm in 7 to 9 y) for Moose Lake walleye with the average fish reaching 500 mm total length in 7 y. Males and females grew at similar rates, but males were estimated to reach an average maximum size of 538 mm total length while females can reach 631 mm total length. Walleye from Moose Lake matured early, with males reaching maturity by age 3 and females by age 5.

Partnerships

Alberta Sustainable Resource Development

Land Management

Land Management projects are delivered within three categories: 1) Habitat Conservation, 2) ACA Conservation Site Management, and 3) Recreational Opportunity Initiatives.

The impact of conservation: more than just numbers

Thousands of acres worth millions of dollars—it's easy to lose the significance of habitat conservation in the numbers. The big projects are certainly satisfying to secure, but sometimes a big difference can also be made in the health of a species by improving a few kilometres of streambank or fencing. Any step made toward the conservation of our natural heritage is one in the right direction. Identifying those needs and opportunities, and working with landowners and member groups to conserve key habitat, is what ACA's Land Management program is all about.

This year, we acquired 12 new Conservation Sites and one Conservation Easement, covering over 4,300 acres (1,740 ha) and worth in excess of $9 million. In addition, we expanded the protection of two existing Conservation Sites by 1,370 acres of Crown land using protective notations together with Alberta Sustainable Resource Development. Most of our acquisitions have been collaborative efforts with other conservation organizations, private donors and corporate partners. Through our continued partnership with Suncor Energy Foundation and Shell Canada Energy, we expanded our terrestrial conservation work in the boreal regions of Alberta.

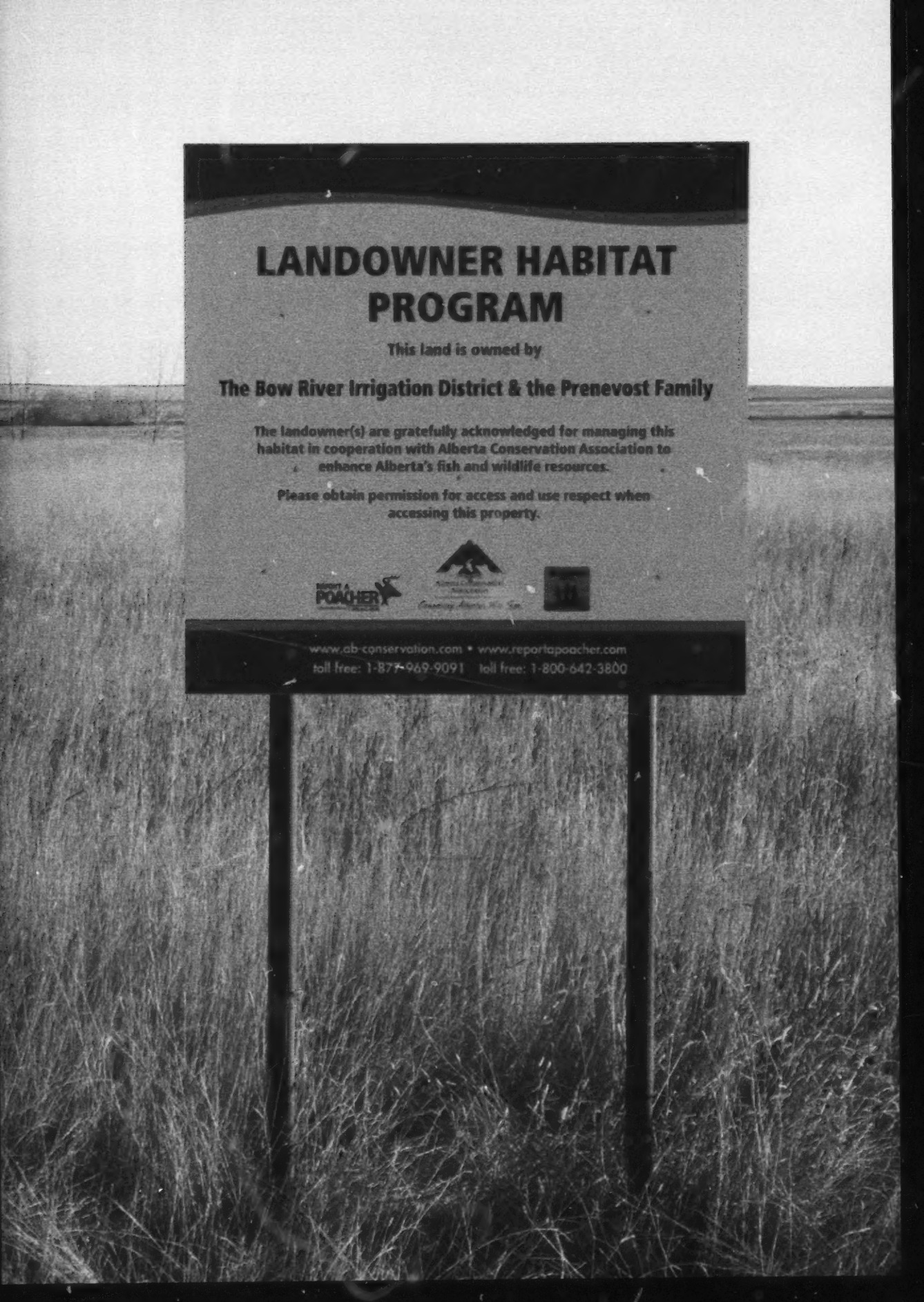
Private landowners also play a big part in our conservation efforts and successes. Our Landowner Habitat Program (LHP) is designed to conserve key wildlife and fish habitat and enhance recreational access on deeded lands using term agreements. We currently manage 54 LHP agreements protecting 8,600 acres (3,480 ha) of habitat, including two new agreements conserving an additional 847 acres (342 ha) this year alone. Notably, we signed two additional habitat retention agreements along the North Raven River, which brings the total number of agreements on the Clear Creek, North Raven and Raven River to five.

We gratefully acknowledge the cooperation and support of our many partners and private landowners; without their support and involvement these accomplishments could not have been achieved. Our partners are identified within each project on the following pages.

Habitat improvements: better for residents and visitors

Habitat management is more than putting up a sign and some fencing. It's more like taking care of a really, really big back yard: there are weeds to control, fences and other infrastructure to fix, areas to inspect, and land use and conservation easements to monitor—all on the 200,000+ acres of land ACA either owns or manages. All in all, ACA staff and seasonal employees spent over 11,000 hours completing inspections and maintenance on over 140 Conservation Sites across Alberta, covering nearly 100,000 acres (40,469 ha) of habitat. Volunteers, member groups and partners assisted us immensely in completing our work.

All of this good management takes solid planning to guide ACA and our partners in the future management of our Conservation Sites. We developed 53 management plans for Conservation Sites that we either own or manage (Crown). We focus on active management by enhancing and restoring habitat to improve the overall quality


LANDOWNER HABITAT PROGRAM
This land is owned by
The Bow River Irrigation District & the Prenevost Family
The landowner(s) are gratefully acknowledged for managing this habitat in cooperation with Alberta Conservation Association to enhance Alberta's fish and wildlife resources.
Please obtain permission for access and use respect when accessing this property.
REPORT A POACHER
www.ab-conservation.com • www.reportapoacher.com
toll free: 1-877-969-9091 toll free: 1-800-642-3800

for various wildlife and fish. Last year, we completed habitat enhancements on 12 Conservation Sites, including the development of an eight acre wetland, reseeded native grass and cattails, enhanced upland bird and ungulate habitat, planted over 120,000 trees and shrubs, maintained and installed waterfowl nest tunnels and nest boxes, enhanced parking areas for users, and completed trial weed control projects and completed site preparation for various vegetation enhancements on other Conservation Sites. We also installed new signage at 32 Conservation Sites.

Fisheries access sites provide enhanced opportunities for anglers to access four rivers and 27 lakes across Alberta, thereby increasing quality recreational opportunities for public use. In 2011/12 we inspected and maintained 31 fisheries access sites and completed various upgrades and enhancements at nine sites to improve their overall appearance. We maintained 25 in-kind and financial partnerships that contributed to various enhancements on these sites. Volunteer stewards, industry, government, municipalities, various corporate partners and other organizations collaborated with ACA to provide enhanced angling opportunities.

The great outdoors: yours to discover

The *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide* profiles 715 Conservation Sites covering over 285,000 acres (115,335 ha) across Alberta. Secured by ACA and our partners, these sites offer all types of sustainable recreational opportunities including hunting, angling, photography, wildlife viewing and hiking. The popularity and reach of the Guide continues to increase year after year: we distributed over 100,000 copies in 2011/12.

Again, our thanks go to Alberta Fish and Game Association (AFGA), its affiliated clubs, and Ducks Unlimited Canada (DUC) for providing over half of the sites featured in the Guide. Their involvement makes this one of the most extensive outdoor guides available. Our hope is that these opportunities will connect more people to the outdoors and promote the value of habitat conservation for future generations.

Overall, the success of our Land Management program activities in 2011/12 involved the support and effort of over 80 partnerships, including government, industry, NGOs, counties/municipalities, leaseholders, private landowners, corporate partners and other interested groups. We look forward to the challenges and opportunities in 2012/13 and we are optimistic that we will make huge steps forward again this upcoming year.

2011/12 Overview

- 12 new Conservation Sites secured totaling 4,300 acres (1,740 ha)
- $9,000,000 in lands secured (approximate value)
- 847 acres of habitat protected using landowner habitat retention agreements
- 141 Conservation Sites inspected
- 12 Conservation Sites underwent habitat enhancements
- 11,000 hours spent by ACA staff on Conservation Site management and maintenance
- 9 Fisheries Access Sites received upgrades and enhancements
- 32 Conservation Site signs installed
- 26 Conservation Sites required recommendations on land use referrals
- 53 management plans completed

Conservation Site Management

ACA is responsible for the annual maintenance and management of over 200,00 ac (80,937 ha) of titled and Crown land in Alberta. Our Conservation Site Management Program is responsible for the majority of these conservation assets in accordance with site management plans. Specific objectives of this program are to deliver the program in an efficient and timely manner, complete inspections and necessary maintenance on Conservation Sites, and enhance or restore habitat on Conservation Sites. Our work is done with the participation and support of our numerous partners throughout Alberta.

In 2011/12, we inspected and maintained 207 Conservation Sites across the province. We completed routine maintenance on 71 Conservation Sites, including mechanical and chemical vegetation control, fence repairs, nest box repairs, and other general site and trail maintenance. We installed 30 Conservation Site signs and provided recommendations on 20 industrial referrals. We also managed public access on two sites through a reservation system. We completed enhancement projects on 31 Conservation Sites, including the development of approximately 50 ac (20 ha) of wetlands, enhancement of fish habitat along the North Raven River, planting of 100,000 spruce trees, 20,000 aspen and over 600 shrubs, and reseeding of grass/forb mixes on over 10 km of trails and over 480 ac (194 ha) of cropland to benefit ungulates, upland game birds and waterfowl. We also completed access enhancements at five sites to benefit outdoor enthusiasts.

Partnerships

Alberta Fish and Game Association, Alberta Sport, Recreation, Parks and Wildlife Foundation, Alberta Sustainable Resource Development, Fish and Wildlife Division and

Lands Division, Beaver Hills Initiative, Bow River Irrigation District, Buffalo Lake Naturalists, Calfrac, Cameron Development Corporation, Clear Water Land Care, Clearwater County, County of Barrhead, County of Lethbridge, County of Newell, County of Strathcona, County of Warner, Ducks Unlimited Canada, Eastern Irrigation District, Edmonton and Area Land Trust, Nature Conservancy of Canada, Pheasants Forever – Calgary Chapter and Chinook Chapter, landowners, Robert Bateman, Shell Canada Energy, Strathcona Wilderness Centre, Suncor Energy Foundation, Total E&P Canada, TransCanada Pipelines, Tree Canada, Trout Unlimited Canada – Central Chapter

Corporate Partners Program

Through this program, ACA works with corporate partners to secure important native habitat areas for wildlife and fish and enhance recreational opportunities for Albertans. The program is guided by agreements developed with corporate partners and by selected

Corporate Partner Securement Transactions in 2011/12

Name	Corporate Partner	Size (ac)	Special Features
Warrensville Expansion SE22-84-23-W5M SW23-84-23-W5M	Suncor Energy Foundation	320	This site is located 27 km northwest of Peace River. The majority of land to the south and northeast is a mix of forested and agricultural land. To the northwest, forest dominates. Lac Cardinal, an important waterfowl lake, lies 6.5 km southwest of the site and several other smaller waterbodies are scattered across the surrounding landscape.
Doe Creek SW15-79-8-W6M NE3-79-8-W6M SE15-79-8-W6M SW10-79-8-W6M NW10-79-8-W6M SW14-79-8-W6M NW14-79-8-W6M SE9-79-8-W6M NE9-79-8-W6M NE10-79-8-W6M NW15-79-8-W6M NW3-79-8-W6M NW4-79-8-W6M	Shell Canada Energy	1,780.8	This site is located 23 km from Spirit River and is a mixture of hayland, logged areas, mature boreal forest and riparian habitat. Ksituan River meanders through the site.
North Fawcett 6 SE32-64-1-W5M SW32-64-1-W5M	Shell Canada	320	This site is located 52 km north of Westlock and consists primarily of improved pasture. We are planning a reforestation project on the lands through a three-way partnership with ACA, Trees Canada and Shell Canada. The north side of this site is adjacent to North Fawcett 2 Conservation Site.
North River SE3-56-8-W4M	Suncor Energy Foundation	155.4	This site is located 29 km southeast of St. Paul and consists of a mosaic of deciduous forests, dominated by trembling aspen and balsam poplar, naturalizing meadows and shrublands. The site is in close proximity to ACA's Stoney Lake Conservation Site and provides important linkages along the river valley corridor of the North Saskatchewan River.
North Vilna NE12-60-13-W4M	Suncor Energy Foundation	161	This site is located 10 km northeast of Vilna and consists of boreal forest, which is excellent habitat for mule deer, white tail deer, moose, black bear, small fur bearers and waterfowl. The landscape to the northwest of the site is dominated by boreal forest; the landscape to the northeast is agricultural land.
Musidora 2 NW26-53-11-W4M NE26-53-11-W4M	Suncor Energy Foundation	320	This site is located 35 km northeast of Vegreville and consists primarily of mixed forest with small ephemeral wetlands and some tame pasture. South Plain Lake and Musidora Conservation Sites are situated in close proximity to each other. The majority of land to the northwest and south is intact boreal forest. Agricultural land used for grain and cattle farming occurs east and north of the site.
TOTAL		3,057.2	

priority 'Focus Areas'. Corporate partnerships and collaborations with other conservation agencies allow ACA to maximize assets and overall effectiveness of our securement programs. Together in 2011/12, we secured six new Conservation Sites totaling 3,057.2 ac of high-quality habitat with an estimated land value of over $1,900,000.

Partnerships

Alberta Fish and Game Association, Alberta Sport, Recreation, Parks and Wildlife Foundation, Environment Canada – Ecological Gifts Program, Shell Canada Energy, Suncor Energy Foundation

Fisheries Access Site Management

ACA's Land Management Program encompasses activities intended to conserve, protect and enhance fish and wildlife habitat and to increase sustainable recreational opportunities including angling and hunting. One activity of the program is the management of fisheries access sites across the province. The Fisheries Access Site Management Program provides enhanced opportunities for anglers to access key streams, rivers and lakes throughout the province. We maintained 31 fisheries access sites in 2011/12 and upgraded nine sites with improvements to parking facilities (one site), a wheelchair-accessible dock (one site), a floating dock (one site), day use facilities such as outhouses and bear-proof garbage disposal bins (five sites) and signage (five sites). We engaged 25 partners in 2011/12 who made financial contributions or provided in-kind support. We met with Alberta Sustainable Resource Development representatives and other potential partners to discuss developing a new fisheries access site in our Central region and expanding an existing fisheries access site in our Northwest region.

Partnerships

Alberta Environment, Alberta Fish and Game Association, Alberta Sustainable Resource Development, Fish and Wildlife Division and Lands Division, Alberta Tourism, Parks and Recreation, Clearwater County, County of Camrose, County of Newell, County of Warner, Daishowa-Marubeni International Ltd., Devon Canada Corporation, Grimshaw Agricultural Society, Hillcrest Fish and Game, Lamont Fish and Game, Mancal Energy Inc., Municipal District of Rocky View, Municipal District of Sunrise County, North Raven River Working Group, RTC Services Ltd., Shell Canada Energy, Town of Lamont, Trout Unlimited Canada – Central Chapter and Yellowhead Chapter, Weyerhaeuser, Zama Lake Society

Landowner Habitat Program

Alberta's natural land base is under intense pressure from a variety of sources. Population growth in Alberta since 2007 averaged around 53,500 new people per year. Expansion of urban areas contributes to habitat loss and fragmentation. Land in crops increased by about 500,000 ha (1.2 million ac) between 1986 and 2006. Industrial activities related to oil and gas and mining also contribute to habitat loss, fragmentation and degradation. In 1986, Alberta Fish and Wildlife Division launched the Landowner Habitat Program (LHP) to prevent the destruction of native habitat on privately owned lands. The program was structured to make annual or lump-sum payments to landowners who agreed to retain wildlife habitat on their land by signing a legally binding agreement. While the program provided a cost-effective tool for preserving habitat, it did not guarantee recreational access to the habitat.

In 2008, ACA modified the LHP agreement to include recreational access as a condition of the agreement. The program requires landowners to retain and idle habitat for wildlife and provide reasonable public foot access. 2011/12 was the fourth year that we offered these agreements to landowners. Many landowners with expiring agreements were unwilling to provide reasonable public foot access. Ten landowners agreed to the terms of the new program and were willing to sign 5 to 20-year agreements. These ten agreements protect approximately 1,462 ac of high-quality habitat and provide reasonable public foot access for sustainable recreational opportunities. We currently manage 54 LHP agreements across the province protecting 8,609 ac of wildlife and fish habitat.

Partnerships

Landowners

Management Plan Development

ACA is dedicated to efficiently managing Conservation Sites that we either hold title to or manage on behalf of the Crown. Management plans provide clear direction for the overall future management of these sites. These plans also serve to streamline roles and responsibilities and other activities that are agreed upon by our conservation partners. ACA is striving to ensure that newly acquired sites have completed and signed management plans within six months of acquisition. We also review the status of management plans for other sites that we manage to ensure that management plans are complete and up to date. In 2011/12, we developed, revised or updated 53 management plans. Of these plans, six were for sites acquired since 2010 and 47 were for sites acquired prior to 2011.

Partnerships

Alberta Fish and Game Association, Alberta Sustainable Resource Development, Beaver Hills Initiative,

Cameron Development Corporation, County of Strathcona, Ducks Unlimited Canada, Edmonton and Area Land Trust, Glen and Kelly Hall, MULTISAR, Nature Conservancy of Canada, Pheasants Forever – Calgary Chapter and Chinook Chapter, Shell Canada Energy, Suncor Energy Foundation, Robert Gouin, The First St. Paul Beavers, Cubs and Scouts, Town of Canmore

Provincial Habitat Securement Program

Through this program, ACA secures important wildlife and fish habitats through land purchases, land donations and protective notations on Crown lands. These habitats provide Alberta's outdoor enthusiasts with year-round sustainable recreational opportunities. The program is guided by provincially-developed priority 'Focus Areas' that help prioritize securement efforts and opportunities. Collaborative partnerships with conservation groups, companies and private individuals allow ACA to maximize assets and the efficiency of our habitat securements. Together in 2011/12, we conserved 1,893 ac on three sites, including one Crown land parcel that we jointly manage with Alberta Sustainable Resource Development and two land acquisitions with an estimated land value of approximately $4,092,000.

Partnerships

Alberta Fish and Game Association, Alberta Sustainable Resource Development, Fish and Wildlife Division and Lands Division, Environment Canada Habitat Stewardship Program for Species at Risk, Wayne Glenn, Glen and Kelly Hall, Medicine Hat Fish and Game, Pheasants Forever – Calgary Chapter and Chinook Chapter

Streambank Fence Renegotiation Strategy

The Alberta Government's Buck for Wildlife Streambank Fencing Program was initiated in the 1970s to protect fish and wildlife habitat, as well as provide public access to angling streams. ACA is currently responsible for honouring maintenance commitments of inherited landowner agreements, which has become a significant financial burden. Our goal for the project is to reduce annual programming costs while continuing to protect riparian habitat and provide anglers with access to priority streams. Building on the success of our 2010/11 pilot project on the North Raven River, we expanded our focus area in

Habitat Securement Program Transactions in 2011/12

Name	Securement Tool & Partners	Size (ac)	Special Features
Lac Cardinal Point Uplands (expansion) SE22-84-23-W5M SW23-84-23-W5M	A partnership between Alberta Conservation Association, Alberta Sustainable Resource Development and lessee (Wayne Glenn) to protect Crown land through protective notations.	133	This site is located 24 km west of Peace River along the shores of Cardinal Lake. This site provides excellent waterfowl habitat and winter habitat for ungulates, including elk, moose and deer. The addition of these lands expands the existing Conservation Site to 623 acres.
Timber Ridge E½ 18-015-23-W4M E½ 08-015-23-W4M NW 07-015-23-W4M	A partnership land acquisition (share based) between Alberta Conservation Association and Glen and Kelly Hall to conserve habitat through sustainable ranching practices.	800	This 800 acre site is located approximately 20 km southwest of Nanton. The site was secured as a unique partnership with the Hall Family to conserve wildlife habitat and demonstrate sustainable ranching practices. As such, the site continues to operate as a working ranch in the Porcupine Hills and provides native forest and grassland habitat for deer, elk, moose, grizzly bear, cougar and many more species native to this ecotonal habitat.
Ross Creek W½ 09-012-03-W4M All 08-012-03-W4M	A partnership land acquisition among Alberta Conservation Association, Alberta Fish and Game Association, Environment Canada Habitat Stewardship Program for Species at Risk, Medicine Hat Fish and Game and Pheasants Forever (Calgary and Chinook chapters).	960	This 960 acre site is located approximately 19 km east of Medicine Hat along the Trans Canada Highway and offers important habitat for species at risk. Habitat management and enhancement is planned for pronghorn, deer and upland birds, such as pheasants and sharp-tailed grouse. Ross Creek flows through a cottonwood stand at this site.
TOTAL		**1,893**	

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2011/12 to include Clear Creek and the Raven River. We signed five new lease agreements with landowners that are being administered through the Landowner Habitat Program. To facilitate new agreements, two large fence improvement projects were contracted to relocate 6 km of fence, and fencing materials were contributed to a landowner to perform upgrades. Red Deer County contributed $10,000 towards improvement projects through the Off the Creek Program, and Trout Unlimited (Edmonton Chapter) contributed $5,000 towards annual lease payments. Using habitat lease agreements, we successfully protected 215 ac of priority habitat, which amounts to an additional 40 ac than what was previously protected under existing Buck for Wildlife agreements.

Partnerships

Clearwater County, Dickson Fish and Game, landowners, Red Deer County, Trout Unlimited Canada – Central Chapter and Edmonton Chapter

Conservation Reports

The following Conservation Reports were completed and published in the 2011/12 fiscal year and are available on our website at ab-conservation.com, under publications.

Fisheries

Blackburn, J., B. Hurkett, T. Furukawa, P. Halinowski, and M. Rodtka. 2012. Baseline Inventory of Sport Fish in the Edson River, 2011. Data Report, T-2011-001, produced by the Alberta Conservation Association, Lethbridge, Alberta, Canada. 27 pp + App.

Buskas, M., and C. James. 2012. Northern pike and walleye summer sport fishery at Haig Lake, 2011. Data Report, D-2012-001, produced by the Alberta Conservation Association, Peace River, Alberta, Canada. 13 pp + App.

Buskas, M., and C. James. 2012. Summer sport fisheries at Figure Eight and Sulphur lakes, Alberta 2011. Data Report, D-2012-002, produced by the Alberta Conservation Association, Peace River, Alberta, Canada. 10 pp + App.

Cantin, A., and T. Johns. 2012. A fish-based index of biological integrity for assessing ecological condition of the Beaver River watershed. Technical Report, T-2012-001, produced by the Alberta Conservation Association, Sherwood Park, Alberta, Canada. 49 pp + App.

James, C. 2012. Abundance and population structure of walleye in Fawcett and Moose lakes, Alberta, 2011. Data Report, D-2012-003, produced by the Alberta Conservation Association, Peace River, Alberta, Canada. 15 pp + App.

Fitzsimmons, K. 2012. Spawning demographics of bull trout in the upper Red Deer River drainage, 2009-2011. Data Report, D-2012-007, produced by the Alberta Conservation Association, Cochrane, Alberta, Canada. 24 pp + App.

Progress Report

Johns, T., and A. Cantin. 2012. Owl River riparian restoration and enhancement project. Progress Report, produced by the Alberta Conservation Association, Sherwood Park, Alberta, Canada. 16 pp + App.

Wildlife

Hudson, Velma. 2012. Alberta Waterfowl Crop Damage Prevention Program, 2011. Data Report, D-2012-004, produced by the Alberta Conservation Association, St. Paul, Alberta, Canada.7 pp + App.

Wright, K.D. 2012. Hay-Zama Lakes waterfowl staging and bald eagle nesting monitoring program, 2011. Data Report, D-2012-005, produced by the Alberta Conservation Association, Peace River, Alberta, Canada. 20 pp + App.

Report A Poacher and Compensation Programs

There are more than 200,000 acres' worth of hunting, fishing and hiking territory within ACA's Conservation Sites alone, and millions more of private and crown land (in some cases) available for outdoor recreation. With such a vast expanse to patrol, Alberta Fish and Wildlife officers are reliant upon the eyes and ears of the community to report suspected illegal activity through the Report A Poacher program.

Report A Poacher (RAP) is a community-based program that enables all Albertans – not just hunters and anglers – to help protect our wildlife, fish and natural habitats. With dozens of poaching infractions unsolved each year, every piece of information can help lead to an arrest and stop the poaching of our precious wildlife. RAP provides a toll-free phone number (1-800-642-3800) for people to report suspected illegal activity 24 hours a day, seven days a week.

The RAP program is jointly delivered by ACA and Alberta Sustainable Resource Development (ASRD). A Memorandum of Understanding defines the terms of the relationship between our organizations. ACA is responsible for promotional and educational activities to maintain public awareness and understanding of poaching and the RAP program, as well as the administration of the program funds which are used by ASRD as reward payments. ASRD retains sole responsibility for liaising with informants, investigating reports and any enforcement actions.

2011/12 Overview

- 10,530 total calls from the public to the RAP toll-free phone number
- 1,545 calls related to suspected illegal activity
- 293 offenders charged with poaching
- $45,200 in rewards paid out to individuals whose call and information led to an arrest or fines
- Attended numerous trade shows and events throughout Alberta with the RAP trailer, distributing branded promotional items in order educate an raise awareness about poaching and ethical hunting and fishing practices
- Increased RAP promotion through social media, television, radio and print
- Updated a variety of promotional items

ACA takes pride in fostering good working relationships with landowners. For producers whose livestock may have been killed or damaged as a result of predators (eagles, cougars, bears and wolves) or hunter activities, relief is provided through the Wildlife Predator Compensation and Shot Livestock Compensation programs. Like Report A Poacher, we are responsible for program promotion and compensation fund management, while ASRD is responsible for incident investigations and determination of informant payouts.

Compensation Programs

Wildlife Predator	Claims	Compensation
Eagle	0	$0
Cougar	12	$4,199.46
Black Bear	16	$24,464.46
Grizzly Bear	20	$22,877.31
Wolf	176	$219,365.96
Unknown Predator	4	$3,165.61
TOTAL	228	$274,072.80

Shot Livestock	16	$22,773.64

Grant Eligible Conservation Fund

Funded by Alberta's hunters and anglers through license levies, the Grant Eligible Conservation Fund (GECF) supports a variety of projects each year which benefit our wildlife and fish populations as well as the habitat they depend on.

The fund is administered in two parts:

Part A: Conservation Support and Enhancement

Funds conservation activities in Alberta by individuals, organizations, and communities that contribute to: healthy fish and wildlife populations, healthy environment for fish and wildlife and the understanding, appreciation and use of that environment.

Part B: Research

Funds high-quality research projects on wildlife, fish and habitat which inform the effective management of wildlife, fish populations, and habitat in Alberta.

2011/12 Overview

Conservation Support and Enhancement (Part A)

- Received 66 applications requesting just over $1.35 million
- 32 projects were funded for a total of $492,762

Research (Part B)

- Received 32 applications requesting just over $736,000
- 20 research projects were funded for a total of $350,136

GECF Part A: Conservation Support and Enhancement

Small Grants Awarded ($3,000 and under)

Beaverhill Bird Observatory: Bat monitoring and appreciation in central Alberta, $3,000

Calgary Bird Banding Society: Cypress Hills migratory and breeding landbird monitoring, $3,000

Camrose Wildlife and Stewardship Society: Camrose purple martin festival, $3,000

Cows and Fish (Alberta Riparian Habitat Management Society): Southern Alberta Grazing School for Women - bringing habitat and fisheries stewardship to livestock producers, $3,000

Friends of Fish Creek Provincial Park: Watershed stewardship project: Amphibian monitoring and awareness program in Fish Creek Provincial Park, $1,500

Friends of Fish Creek Provincial Park: Watershed stewardship project: Invasive species strategy in Fish Creek Provincial Park, $1,500

Lac La Biche County: Lac La Biche wetland inventory and classification plan, $1,500

Lac La Biche County: Lac La Biche watershed project, $3,000

Nose Creek Watershed Partnership/ Trout Unlimited Canada: Nose Creek rehabilitation project, $3,000

Red Deer Fish and Game Association: Radomske's Pond, $3,000 (grant not used)

Stony Plain Fish and Game Association: Bird Nesting Box Program, $1,200

University of Alberta Student Chapter of The Wildlife Society: Urban deer project, $2,000

Weaselhead/Glenmore Park Preservation Society: Weaselhead Invasive Plant Program, $3,000

GECF Part A: Conservation Support and Enhancement

Large Grants (over $3,000)

Alberta Fish and Game Association: Pigeon Lake properties habitat protection, $10,940

Alberta Fish and Game Association: Pronghorn antelope migration corridor enhancement, $37,100

Alberta Fish and Game Association: Operation Grassland Community habitat enhancement projects, $40,000

Ann & Sandy Cross Conservation Area: Wildlife friendly fencing project, $10,000

Beaverhill Bird Observatory: Beaverhill Lake stewardship and monitoring, $16,950

Cows and Fish (Alberta Riparian Habitat Management Society): Westslope cutthroat trout riparian habitat improvement action plans, $24,000

Crowsnest Conservation Society: Maintaining and restoring

Crowsnest River riparian areas, $30,000

Delta Waterfowl Foundation: ALUS demonstration project in the County of Vermilion River, $32,500

Ghost Watershed Alliance Society: Riparian and wetlands health assessment and inventory by Cows and Fish of critical areas in the Ghost watershed, $35,880

Lesser Slave Lake Bird Observatory: Avian monitoring and stewardship at Lesser Slave Lake, $23,500

Mountain View County: Riparian area management improvements, $20,000

Nature Alberta: Public and volunteer engagement with Alberta's Important Bird Areas, $25,000

Nature Alberta: Riparian water quality improvement project, $33,000

Northern Alberta Institute of Technology (NAIT): Sturgeon River watershed habitat enhancement study, $24,192

Partners in Habitat Development: Partners in Habitat Development, $15,000

Red Deer County: Off the Creek Program 2011, $30,000

Trout Unlimited Canada: East Slopes Creek Conservation Initiative, $20,000

West Central Forage Association: Paddle River enhancement project - Phase II, $13,000

Willmore Wilderness Foundation: Willmore Wilderness Park Stewardship & Youth Mentoring Initiative, $20,000

GECF Part B: Research

Alberta Innovates: Technology Futures, Northern leopard frog overwintering habitat - identifying suitable hibernation sites, $15,000

Calgary Zoo: Using metapopulation modelling to insure the effective conservation of northern leopard frogs, $21,000

Keyano College: Impacts of oil sands mining on amphibian health in the boreal forest: Are infection disease dynamics and malformation rates correlated with oil sands mining activities? $19,000

Laval University: Population dynamics of mountain goats in Alberta, $9,000

University of Alberta: Ecological effects of sport fish stocking and aeration in Boreal Foothill lakes (the FIESTA project), $14,980

University of Alberta: Development of a cost-effective tool for monitoring grizzly bear population size and trend in support of their recovery and management, $35,000.00

University of Alberta: Effects of hunting pressure and recreational access on behaviour of elk in southwestern Alberta, $21,500

University of Alberta: Identifying critical habitat for ferruginous hawks in Alberta, $24,640

University of Alberta: Examining trumpeter swan productivity and population in Alberta; survey methods and swan response to disturbance, $20,700

University of Alberta: Effects of native plant reproductive strategies on reclamation success, as measured by ecosystem function and services, $23,000

University of Alberta: Eco-evolutionary dynamics of phenology in resident mammals, $10,000

University of Alberta: Beaver-created wetlands and biodiversity, $6,250

University of Alberta: Using wetland-dependent wildlife to monitor climate and landscape change, $6,250

University of Calgary: Assessing pre-historic distribution, abundance and genetic diversity of elk (Cervus elaphus) in Alberta through archaeological and ancient DNA analysis, $19,060

University of Calgary: Assessment of the distribution and hybridization of white-tailed and mule deer in relation to forest fragmentation using genetic markers, $14,296

University of Calgary: Novel methods to evaluate exposure to, and effects of oil and gas emissions on wild birds, $10,000

University of Lethbridge: Examining resiliency of bull trout populations to brook trout invasiveness, $20,000

University of Regina/ Canadian Wildlife Service: The effects of oil and gas development on the reproductive success and density of grassland songbirds, $23,000

University of Saskatchewan/ Environment Canada: Identifying risks, impacts, origins and movement patterns of infectious pathogens in blue-winged teal (Anas discors) in the Canadian Prairies, $27,960

University of Sherbrooke: Experimental management of bighorn sheep, $9,500

Grants in Biodiversity

The Alberta Conservation Association Grants in Biodiversity program awarded 22 graduate student projects for a total of $206,616. The projects include studies on aggressive crickets, ferruginous hawks, Alberta shallow lakes, mountain pine beetles, elk behaviour, forest development, the sex life of flowers, and the effects of metals on songbirds in the oil sands. Although Alberta based universities took the majority of the awards, this year the body of knowledge about Alberta's biodiversity will also benefit from projects being conducted out of Queen's University and the University of Northern British Columbia.

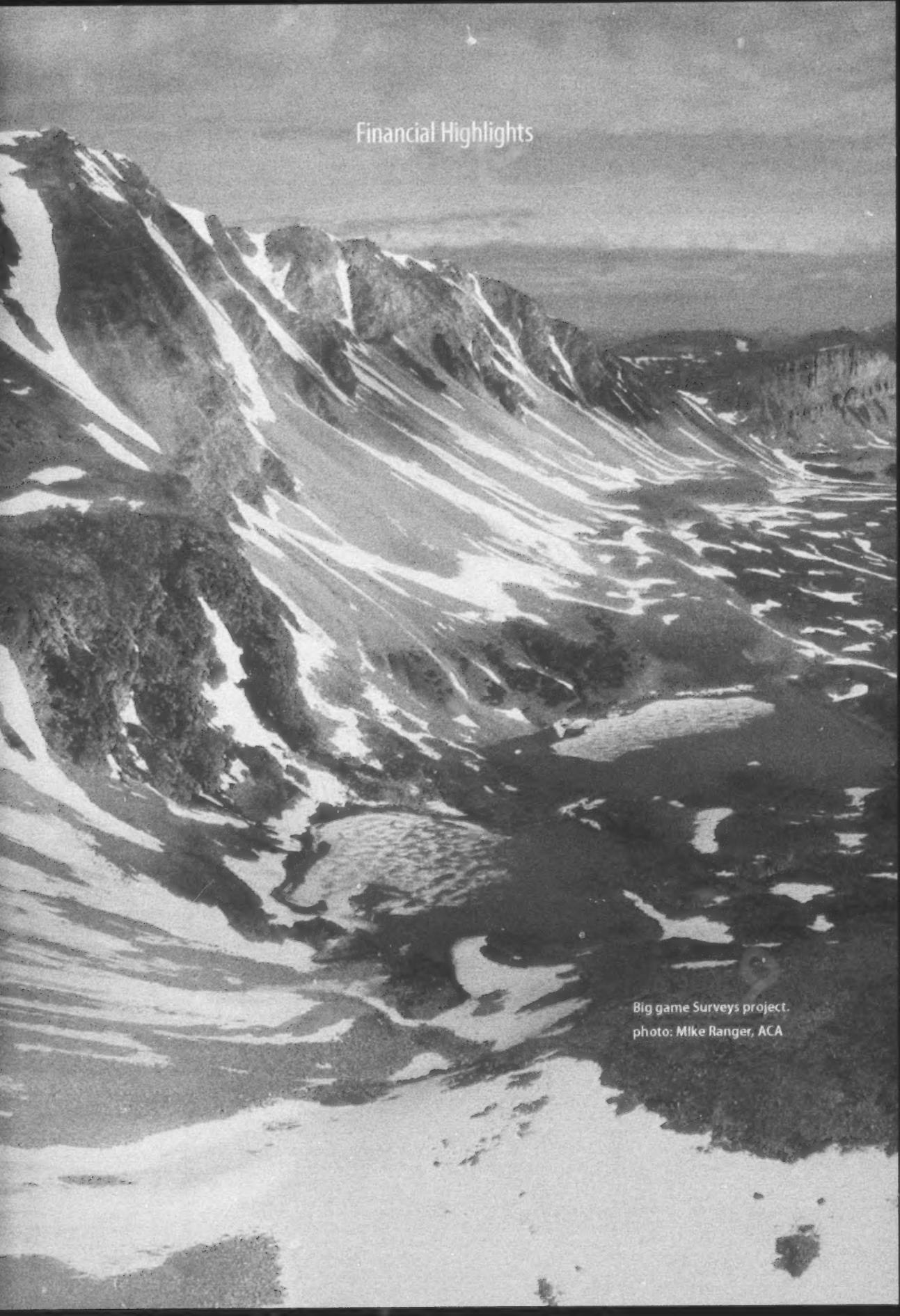
The Grants in Biodiversity program is funded by the Alberta Conservation Association (ACA) and operated through the Alberta Cooperative Conservation Research Unit – a partnership between the University of Alberta, the University of Calgary and the University of Lethbridge. With this year's awards, **the 18 year old ACA Grants in Biodiversity has now awarded over $3.8 million dollars to 383 researchers**. The research supported by the ACA Grants in Biodiversity ultimately aims to conserve, protect and enhance Alberta's fish, wildlife and natural habitats.

Cow elk.
photo: Shevenell Webb, ACA

2012 ACA Grants in Biodiversity Recipients

Recipient	Supervisor(s)	Institution	Project Title
Heather Bird	Felix Sperling	University of Alberta	Alberta-wide species survey of a key herbivore, *Choristoneura* spp., the spruce budworm
Susan Bury	Robert Laird	University of Lethbridge	Intransitivity in male dominance hierarchies augmented by memory effects on aggressive behaviour in crickets, *Gryllus veletis*
Jobran Chebib	Sean Rogers	University of Calgary	Measuring signatures of fishing selection on Lake whitefish (*Coregonus clupeaformis*) in Lesser Slave Lake, Alberta
Paul Cigan	Nadir Erbilgin and JC Cahill	University of Alberta	Mountain pine beetle attacks to ectomychorrizal-seedling feedbacks: Player and processes that govern regeneration in post-outbreak forests
Alana Clason	Phil Burton	University of Northern British Columbia	Resilience and dynamics of whitebark pine at the northern edge of its range under a changing climate
Gregory Earle	Ralph Cartar	University of Calgary	The influence of wing wear on energetics and niche breadth, as a mediator of tongue length and body size, in structuring of bumblebee community
Erick Elgin	Leland Jackson	University of Calgary	Relationships between timing of macrophyte growth and lake turbidity with an emphasis on zooplankton grazing in Alberta shallow lakes
Robert Found	Colleen Cassady St. Clair	University of Alberta	Individual variation in elk behavioural types, stress, nutrition, and life-history strategies
Benoit Gendreau-Berthiaume	Ellen Macdonald	University of Alberta	The process of canopy break-up in lodgepole pine ecosystems of west-central Alberta: Implications for understory plant biodiversity
James Glasier	Scott Nielsen	University of Alberta	*Climate and latitude as determinants of ant species distributions and faunal turnover*
Christine Godwin-Sheppard	Robert Barclay and Judit Smits	University of Calgary	Effects of metals on songbirds in the oil sands region of Alberta
Anna Hargreaves	Christopher Eckert	Queen's University	Ecology and evolution of altitudinal range limits in a montane herb
Lisa Hensel	Lawrence Harder	University of Calgary	Sexual selection in *Delphinium glaucum*: Selection on floral and inflorescence traits and the effects of pollen dispersal patterns
Hyejin Hwang	Vic Lieffers and Soung Ryoul Ryu	University of Alberta	Comparison of understory burning and mechanical site preparation to regenerate lodgepole pine stands killed by mountain pine beetle
Melynda Johnson	Erin Bayne	University of Alberta	The effects of landscape ecology on post fledging ferruginous hawk movements and survivorship
Mathias Kaiser	Mary Reid	University of Calgary	Acoustic ecology of mountain pine beetles
Cory Kremer	Sean Rogers	University of Calgary	Landscape genetics of brook stickleback (*Culaea inconstans*)
Kevin Kwok	Robert Laird	University of Lethbridge	Inducible anti-herbivore defenses of the annual sunflower (*Helianthus annuus*) against a specialist sunflower beetle (*Zygogramma exclamationis*)
Guadalupe Peralta-Vázquez	Mary Reid	University of Calgary	Ecology and fitness effects of phoretic mite fauna on bark beetle hosts
Jesika Reimer	Robert Barclay	University of Calgary	Adaptations of *Myotis lucifugus* at northern latitudes in the face of climate change and whitenose syndrome
Haley Tunna	Leland Jackson and Sean Rogers	University of Calgary	Population genetics of skewed ratios in longnose dace (*Rhinichthys cataractae*)
Bradley van Paridon	Cameron Goater and John Gilleard	University of Lethbridge	Invasion pathway and population genetics of introduced lancet liver fluke in ungulates in Cypress Hills Park, Alberta

Financial Highlights



Big game Surveys project.
photo: Mike Ranger, ACA

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KRP LLP
KINGSTON ROSS PASNAK

June 7, 2012
Edmonton, Alberta

INDEPENDENT AUDITOR'S REPORT

To the Members of Alberta Conservation Association

We have audited the accompanying financial statements of Alberta Conservation Association, which comprise the statement of financial position as at March 31, 2012, and the statements of operations, changes in net assets and cash flow for the year then ended , and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.

Basis for Qualified Opinion

The Association is recording its investment in a subsidiary company at cost. Under Canadian generally accepted accounting principles, profit-oriented enterprises controlled by not for profit organizations must be either consolidated or accounted for using the equity method. As the subsidiary was dormant during the year, the effect of this departure from Canadian generally accepted accounting principles is not considered material to the financial statements.

In common with many not-for-profit organizations, the Association derives some of its revenue from partner contributions and donations, the completeness of which is not susceptible to satisfactory audit verification. Accordingly, our verification of these revenues was limited to the amount recorded in the records of the Association and we were not able to determine whether any adjustments might be necessary to partner contributions, excess of revenue over expenses, current assets, deferred contributions and net assets.

Qualified Opinion

In our opinion, except for the possible effect of the matters in the Basis of Qualified Opinion paragraph above, these financial statements present fairly, in all material respects, the financial position of the Alberta Conservation Association as at March 31, 2012, and the results of its operations and its cash flow for the year then ended in accordance with Canadian generally accepted accounting principles.

Kingston Ross Pasnak LLP

Kingston Ross Pasnak LLP
Chartered Accountants

Summarized Financial Statements

ALBERTA CONSERVATION ASSOCIATION

Year ended March 31, 2012

		2012	2011
RESULTS FROM OPERATIONS			
	REVENUES		
	Fees and assessments	$ 10,377,407	$ 10,352,775
	Partner contributions	1,282,576	2,585,367
	Other	878,284	1,301,727
	Gain (loss) on sale of assets	65,470	(55,301)
	Unrealized (loss) gain on investments	(119,527)	493,973
	Creative sentencing	-	940,000
		12,284,210	16,618,541
	EXPENDITURES		
	Salaries and benefits	6,308,275	6,565,939
	Grants	1,807,613	2,834,282
	Contracted services	1,571,861	1,101,185
	Travel	833,098	786,507
	Office and sundry	811,676	851,780
	Advertising	713,659	392,184
	Rentals	642,322	953,806
	Materials and supplies	556,644	776,642
	Amortization	426,701	649,686
	Landowner agreements	132,307	105,333
		13,804,156	15,017,339
	(DEFICIENCY) EXCESS OF REVENUES OVER EXPENDITURES	**$ (1,319,946)**	**$ 601,202**
FINANCIAL POSITION			
	ASSETS		
	Current assets	$ 891,867	$ 868,241
	Long-term investments	5,402,628	5,694,715
	Property, plant and equipment (net of accumulated amortization)	16,973,702	15,015,336
		$ 23,267,997	$ 21,578,292
	LIABILITIES		
	Current liabilities	$ 6,164,759	$ 5,385,133
	NET ASSETS		
	Invested in property, plant and equipment	16,973,702	15,015,336
	Internally restricted	757,039	649,046
	Unrestricted	(627,503)	528,777
		17,103,238	16,193,159
		$ 23,267,997	$ 21,578,292

APPROVED BY THE BOARD

_____ Director _____ Director

Basis of Presentation (Note 1)

Management is responsible for the preparation of the summary financial statements. The summary financial statements are comprised of the summary statement of financial position and the summary results from operations, and do not include any other schedules, a summary of significant accounting policies or the notes to the financial statements. The summary statement of financial position and the summary results of operations are presented with the same amounts as the audited financial statements, but certain balances have been combined and all note referencing has been removed.

Financial Highlights

Summarized Financial Statements

In 2011/12, ACA received $10,377,407 in levy revenue from hunting and angling licenses, which is a $24,632 increase from the previous year. The increase in levy revenue is attributed to an increase in hunting license revenue of $51,286, offset partially by a decrease in angling license revenue of $26,654. Again this year, a poor spring and early summer with respect to weather was likely the key contributor to the decrease in angling license sales.

Cumulatively, our Wildlife, Fisheries, Land Management and Communications programs had expenditures totaling $10,561,565 plus an additional $2,230,025 in land purchases and donations (owing to changes in our financial reporting this value is no longer recorded as a direct operational expenditure and is instead booked directly as an asset), meaning that approximately 123% of levy value collected went back into conservation of Alberta's resources (expenses plus increase in habitat assets).

ACA received approximately $4.2 million in non-levy revenue (including $2,230,025 in land donations and funds for land purchase). These funds came from a variety of donors, including individuals, corporations, granting foundations, the Federal Government, and other conservation organizations.

Recorded administrative costs have risen slightly this year to 14.4%; up from 12.7% in the previous year. Analysis of the increase shows that the majority of the percentage increase is a result of decreased revenue, as opposed to increased costs.

Expenditures By Program

Often stakeholders want to determine what funds are being directed towards their particular passion. When examining the Expenditures by Program, please keep in mind that the numbers shown are somewhat arbitrary and do not necessarily represent all projects that may relate to a particular program area. For example, the Fisheries program had expenditures of approximately $2.47 million (approximately 24% of levy revenue), but this does not include our riparian fencing or fisheries access site maintenance projects; these have been budgeted within the Land Management program.

Revenue By Source

27% of ACA's total operating budget was generated from non-levy sources ($4,190,885). This represents a decrease of approximately $636,000 in non-levy revenue over 2011/12 which is attributed directly to a delay in several large land donations that closed after fiscal year end. Land donations and purchases in 2011/12 resulted in an additional 1,754 acres conserved for future generations. Closing on an additional 1,939 acres were delayed until the start of the new fiscal and as such do are not recorded in 2011/12.

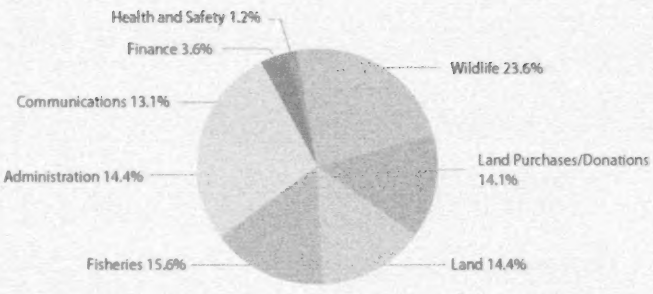
2011/12 Overview

- $10,377,407 received from levies on hunting and fishing licenses
- $4.2 million received in non-levy revenue
- $12,791,590 in value directly applied towards the conservation of Alberta's wildlife, fisheries and habitat
- Administration costs kept to 14.4% of revenue

The pie charts provide a summary of the total operating budget in each program area. We encourage you to review the entire Annual Report to gain a greater understanding of the conservation projects undertaken within each program, and how they may relate to your particular passion. If you have any questions please do hesitate to contact our President & CEO, Todd Zimmerling.

Expenditures by Program

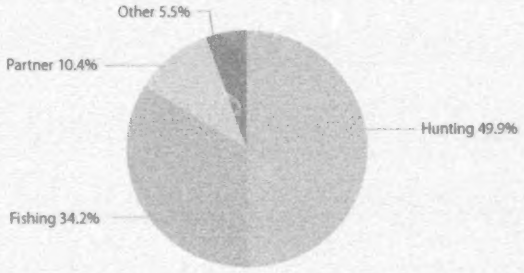
Wildlife	3,741,890
Land	2,273,350
Land Purchases/ Donations	2,230,025
Fisheries	2,470,954
Administration	2,276,585
Communications	2,075,371
Finance	578,461
Health and Safety	187,545
TOTAL	**15,834,181**



Revenue by Source

Hunting	6,162,630
Fishing	4,214,777
Partner	1,282,576
Other	678,284
TOTAL	**12,338,267***

*Not including unrealized gains on investments.



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